THE POLICY MOBILITY OF ENERGY EFFICIENCY AND GREEN GENTRIFICATION IN THE URBAN RENEWAL OF ISTANBUL

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Submitted to the Institute of Environmental Sciences in partial fulfillment of
the requirements for the degree of
Master of Science
in
Environmental Sciences

Boğaziçi University
2018

ACKNOWLEDGEMENTS

There have been many people who have walked alongside me during the last three years in the Institute of Environmental Sciences at Boğaziçi University. I would especially like to thank Prof. Ali Kerem Saysel, who have guided me, placed opportunities in front of me and showed me the doors that might be useful to open. After the completion of this thesis, I will start another academic journey as a PhD student, and Dr. İrem Daloglu Çetinkaya's supports and encouragements during my times at the Institute are sincerely appreciated and gratefully acknowledged. Finally and without any hesitation I would also like to thank Prof. Burak Demirel, Assoc. Prof. Zeynep Kadirbeyoğlu and Assoc. Prof. Hande Paker for their valuable comments, which greatly contribute to develop my arguments in this thesis.

ABSTRACT

THE POLICY MOBILITY OF ENERGY EFFICIENCY AND GREEN GENTRIFICATION IN THE URBAN RENEWAL OF ISTANBUL

The UN's Sustainable Development Goals (SDG), SDG number 11 specifically, has promoted urban sustainability and energy efficiency, as one of the highest potential for cities to tackle with the climate change mitigation globally. Using the concept of 'green gentrification' and 'policy mobility', this thesis will examine and further investigate the ongoing Gaziosmanpasa Urban Renewal Project in İstanbul. The GOP district is particularly interesting for this research because the district has adopted a 'sustainable planning' vision to create sustainable and energy efficient neighbourhoods alongside its on-going seismic-risk driven urban renewal. In Turkey, energy efficiency policy and practices started during the European Union accession process in early 2010s, and the local regime and businesses actors in Istanbul adapted and reinvented themselves surrounding the idea of 'energy efficiency' in the seismic-risk driven urban renewal in the city. Hence, the GOP district has also become an attractive venue for "green" businesses interested in energy certification schemes, such as LEED and BREAM, facilitated by the regulatory schemes known as the 2008 Energy Efficiency Law. Through qualitative data gathered from literature reviews and the data collected through interviews with energy efficiency businesses, municipality officers and social entrepreneurs in Istanbul, the case shows how sustainability planning with high-energy efficiency targets may lead to green gentrification.

ÖZET

İSTANBUL KENTSEL DÖNÜŞÜMÜNDE ENERJİ VERİMLİLİĞİ POLİTİKASI HAREKETLİLİĞİ VE YEŞİL MUTENALAŞTIRMA

Birleşmiş Milletler Sürdürülebilir Kalkınma Hedefleri (SDG), küresel olarak iklim değişikliği etkilerinin kentlerde azaltılması ile mücadele etmek için, özellikle SDG11'de belirtilen kentsel sürdürülebilirliği ve enerji verimliliğini desteklemektedir. Bu tez, "yeşil mutenalaştırma" ve "politika hareketliliği" kavramlarını kullanarak, İstanbul'da devam eden Gaziosmanpaşa (GOP) Kentsel Yenileme Projesi'ni inceleyecek ve ayrıntılı bir şekilde araştıracaktır. GOP bölgesi bu araştırma için özellikle ilgi çekicidir, çünkü bölgede devam eden, depreme dayanıklı konut projeleri, kentsel yenilenmenin yanı sıra sürdürülebilir mahalleler vizyonunu benimsemiştir. Türkiye'nin, 2010 yılı başlarında itibaren Avrupa Birliği'ne katılım sürecinin bir parçası olarak uyguladığı enerji verimliliği politikaları, İstanbul'da yerel yönetim ve iş çevrelerince, depreme dayanıklı konut projelerinde uygulanmaya başlanmıştır. Bu nedenle GOP Kentsel Dönüşüm Projesi, 2008 Enerji Verimliliği Kanunu olarak bilinen düzenleyici yasanın olanak sağladığı LEED ve BREAM gibi enerji sertifika programlarıyla ilgilenen "yeşil" işletmeler için cazip bir mekan haline gelmiştir. Literatür araştırmasından elde edilen nitel veriler ve İstanbul'da enerji verimliliği işletmeleri, belediye yetkilileri ve sosyal girişimcilerle yapılan görüşmeler sonucunda toplanan veriler sonucunda , bu çalışma, enerji verimliliği vizyonu ile oluşturulmuş sürdürülebilir kent planlamasının "yeşil mutenalaştırma" için nasıl bir platformlar haline gelebileceğini göstermektedir.

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
BEP	Building Energy Performance
C40	Cities Climate Leadership Group
EEA	European Environment Agency
EPC	Energy Performance Certificate
EU	European Union
GEF	Global Environment Facility
GOP	Gaziosmanpaşa
GOPAŞ	Gaziosmanpaşa Municipally-owned Construction Company
ICLEI	International Council for Local Environmental Initiatives
IEA	International Energy Agency
IMF	International Monetary Fund
IMM	Istanbul Metropolitan Municipality
İCCAP	İstanbul Climate Change Action Plan
LEED	Leadership in Energy and Environmental Design
MoEU	Ministry of Environment and Urbanisation
OECD	The Organisation for Economic Co-operation and Development
TOKI	Turkish Mass Housing Unit

1. INTRODUCTION

The historic city of Istanbul hosts one-fourth of Turkey's population with 14,657,434 million residents (TurkStat, 2016), and has gone through many large-scale changes, especially through industrialisation, enabling economic development but also causing urban sprawl (Erbas, 2013). The changes have been particularly rapid in the last few decades, with Istanbul's aspirations to become a sustainable and liveable (IMSP, 2015), a "climate friendly city" (İCCAP, 2016). The neo-liberalist agenda in Turkey and Istanbul has led to a system of 'constructocracy', meaning that the construction businesses have become the driver of the national economy (Schelifer, 2013). The urban development of Istanbul is run by a powerful urban coalition of politicians, bureaucrats and business leaders, emerging in the 2000s who have drowned not only the competition, but also the voices of citizens and disadvantaged groups (Türkün, 2011), leading to a high degree of political and economic polarization in the urban renewal processes.

The urban renewal in Istanbul has started in the 2000s to redevelop substandard and unplanned housing stock at the inner city neighbourhoods, with a key motivation to release the rent gap that existed between the potential and the actual real estate values (Karaman, 2013). This was a planned gentrification process (Lelandais, 2014; Uysal, 2012; Candan and Kolluoglu, 2008) which resulted in forced evictions of poor inhabitants of the neighborhoods such as Sulukule (Uysal, 2012) and Tarlabasi (Yilmaz, 2008). This process was a landmark in the transition from a populist to a neoliberal mode of governance (Kuyucu and Unsal, 2010) that incorporated undervalued and unplanned public and private spaces into the circuits of the formal economy (Karaman, 2013).

Istanbul is a city under severe seismic risks and the threat of earthquakes has played a crucial role in compelling enacting of the 2012 "Law of transformation of Areas under the Disaster Risks no.6306" (commonly called the "urban transformation law" or the "disaster law") which was instrumental in expanding and consolidating construction activity in Turkey, particularly Istanbul. The law permits the right holders of earthquake-risky buildings to hire a developer to demolish and re-build an earthquake resilient apartment. This has triggered developers to demolish decaying urban areas due to the earthquake-risk, where lands are financially viable and bring lucrative short-term returns. This eventually accelerated the construction activity throughout the city. Along with the law no. 6306, the 2008 Energy Performance of Buildings Regulation under the Energy Efficiency Law, adopted in 2007, emerged as a window of opportunity for achieving climate

change mitigation goals by boosting energy efficiency in buildings to be rebuilt or renovated under law no.6306. Energy Performance Certificates (EPC) was introduced by the government in 2011 and will be issued to all buildings by 2019. A minimum C level energy standard has become mandatory for all existing buildings and prerequisite for new buildings to be licenced. The fast-track adoption of the 2007 Energy Law is attributed to Turkey's strategic bid to join the EU. Harmonization of Turkish legislation with the EU acquis in energy efficiency sector became a pillar of this strategy, particularly after 2005 when the negotiations for full membership started (Turkish Government, 2004a&2004b; World Bank, 2015; Energy Charter Secretariat, 2003&2014). This harmonization process has accelerated market transformation towards the energy efficient appliances, which foster mitigation through reducing household electricity consumption (and thus carbon emissions) nationally (GEF-MENR, 2013). Energy efficiency in buildings has catalyzed the establishment of new businesses, especially in Istanbul, where the intensity and scale of construction as part of the urban renewal process is the highest.

Considering the energy efficient practices developed in the building sector alongside the mobilized energy efficiency and intensified urban renewal process in Istanbul, this paper will explore the outcomes to date concerning the implementation of sustainable/green and energy efficient building practices through researching the Gaziosmanpasa (GOP) district urban renewal processes. The analysis of the two neighbourhoods, Merkez and Karayollari, within the Gaziosmanpaşa renewal scheme show that the district's urban renewal process is implementing a parcel-based planning approach, which adopts green building practices and sustainable neighborhoods with green spaces to attract affluent residents, thereby excluding green areas from others who cannot afford to live in such residential complexes. This approach limits the potential sustainability aims of Gaziosmanpaşa urban renewal project, and results in green gentrification due to partially "greening" only the designated parts of the district on the one hand, and creating social and environmental exclusion on the other hand.

This paper firstly will outline the methodology of this research, and then we will outline the most recent discussions on urban renewal and planning in Turkey and Istanbul in the third section. After this, we will review the theory of green gentrification and policy mobility, where we will highlight the reasons we use the two theories for this thesis before exploring the Gaziosmanpaşa urban renewal case. The fifth section will introduce the GOP case study, and then we will discuss the key actors of the urban renewal in the district. The understanding of the key actors' roles in the urban renewal of Gaziosmanpaşa will allow us to assess how sustainable/energy efficiency

considerations in urban planning might cause green gentrification in the district. Finally, we will elaborate our results through gathered qualitative data in the section 6, and then we will aim to contribute to green gentrification theory and conclude our study in the section 7.

2. METHODOLOGY

Istanbul case is selected as the city is a megacity on the border of Eurasia, and a driver and trendsetter its national economy with its construction sector and seismic-risk driven urban renewal projects. Thinking this wide urban transformation in the city with the national energy efficiency agenda, the city can accelerate the national energy efficiency by setting its own targets to reduce carbon footprints from its residential areas. The gathered qualitative data from the literature review and interviews suggest that there are dissonances between the national energy efficiency and the on-going urban renewal agenda. Thereof, we chose the GOP urban renewal project as the urban renewal in the district is mandated by the "disaster law" no 6306 and the vision of the local municipality exhibits an open desire for "sustainable transformation" in its strategy documents. Hence, the region has also become an attractive venue for "green" businesses interested in energy certification schemes, such as LEED and BREAM, facilitated by the regulatory schemes known as the 2008 Energy Efficiency Law. We used qualitative methods of semi-structured interviews; field visits to gain stakeholders views of the various dimensions of the urban renewal programmes role in achieving energy efficiency and urban sustainability. During the semi structured interviews we approached both private and public sector entities (in total 39 people; 3 people from Istanbul Metropolitan Municipality, 7 people from the GOP district municipality, 15 people from energy efficiency and green building related businesses, 7 entrepreneurs from start-ups, 7 people from the NGOs and the Chamber of Urban Planners).

Table 2.1. The total number of stakeholders engaged in this research and their respective sectors.

Number of stakeholders	**Stakeholders' sectors**
3	The IMM Municipality
7	District municipalities
15	Material, Chemical and Energy Efficiency Companies
7	Start-up Companies
7	NGOs and the Chamber of Urban Planners

The interviewees were asked questions regarding what they believe and know about sustainability and a sustainable Istanbul, urban renewal and energy efficiency and climate change action, and also about trade-offs between economic, social, and environmental effects of urban renewal. The four field visits consisted of semi structured interviews with the GOP municipality-

owned construction company and excursions to the two neighbourhoods (Merkez and Karayolları) of the district. The semi structured interview data helped to shape the case study context and the discussions and conclusion parts of this paper. A range of documents were also analysed, the main ones being: The 2009 Istanbul Environmental Plan, the 2015 Gaziosmanpasa Municipality Urban Renewal Strategy Plan, and the lawsuits concerning the urban and landscape planning in Gazismanpasa district. In addition, media coverage was investigated and analysed to provide up to date information about current developments in the GOP case.

3. CONTEXTUALIZING URBAN RENEWAL IN ISTANBUL

This section outlines the most recent discussions on urban renewal and planning in Turkey and Istanbul. After elaborating the literature on urban renewal and planning, we will contextualize the theory of green gentrification within the on-going urban renewal of Gaziosmanpaşa district.

3.1. Political Context in Turkey and Istanbul

Arguably one of the biggest players and drivers of urban renewal in Turkey is the Justice and Development Party (Adalet ve Kalkinma Partisi - AKP), which has been in power since 2002, with Recep Tayyip Erdoğan as its leader (current President, former Mayor of Istanbul and Prime Minister of Turkey). Turkey has witnessed large scale changes under AKP, many argue with positive outcomes for its poor population, business and tourism (Economist, 2016) and negative with respect to democracy, human rights, corruption, nepotism, rule of law, regional conflicts, separation of religion and state, relations with the EU and other neighbours, urban planning, climate change action and sustainable development (Gulmez, 2013; Öniş, 2015; Özbudun, 2014; Yardimci-Geyikci, 2014). In fact, several academics argue that Turkish democracy is under threat or in crisis (Gulmez, 2013; Öniş, 2015; Özbudun, 2014; Yardimci-Geyikci, 2014), and it is impossible to understand the dynamics in the urban renewal without understanding the AKP, its history and the power it wields.

Öniş (2015) divides the AKP rule into three distinct sub-periods where the first phase (2002-2007) is described as the "golden age" with high economic growth, significant democratic reforms, development of the 'zero problems with neighbours' foreign policy, and Europeanization due to the application for EU membership. The second phase (2007-2011) was characterized by relative economic stagnation even though the Turkish economy managed the financial crisis reasonably effectively, and democratisation stalled partly due to stalemate in the EU membership negotiations. The third phase (2011-present) Öniş (2015) argues has been a period of decline with the party's performance being "deeply disappointing" with respect to the economy, democratization and foreign policy.

Özbudun (2014) highlights that although the leadership of the AKP comes from Islamic roots the party has presented itself as a conservative democratic party and built coalitions inclusive of "hard-core Islamists" as well as conservative and nationalist voters. This characterizes its electoral

base. Its intellectual leadership has been in coalition with the liberals as well, who have been influential in the media and in foreign public relations, whilst they did not have a strong electoral base. Moreover, hard core "nationalist" voters kept distance with AKP, until it launched a state of war against the Kurdish movement in 2015, because AKP's policy towards the Kurds were ambiguous and The Nationalist Movement Party of the Turkish Nationalists (MHP) has created a sufficient niche for Turkish nationalists.

Özbudun questions what direction the AKP might take in the future, and outlines three possible routes: (1) whether it might return to pursuing the reformist agenda of the past; (2) "drift to some kind of electoral authoritarianism of a more markedly Islamic character"; (3) or "break-up of the AKP coalition, which may lead to a split within the party, or at least a significant weakening of its electoral support" (2014, p. 156). Evidence seem to suggest that the second option is developing, as Erdoğan currently wields much more power than the Presidential office stipulates and wants to change the constitution to officially move the executive power from the Prime Minister to the President (Economist, 2016). When Erdoğan experienced opposition to this change from the former Prime Minister Davutoğlu, he fired him and replaced him with Yıldırım, who is a supporter of the constitutional change to enact presidential power. Prime Minister Yıldırım highlighted at the party congress in May 2016 that elected him that it is time to make "the current de facto situation a legal one" with respect to the presidential executive powers (BBC, 2017).

Over the last decade under AKP rule, Turkey has set ambitious goals such as being the Worlds 10th largest economy and making Istanbul the world capital of finance and a global city. According to (Sassen, 2011, p. 34), global cities are strategic sites for the management of the global economy and the production of the most advanced services and financial operations. For long-term plans to change the economic base of Istanbul from traditional manufacturing industries to finance and services (Keyder, 2005), the construction and real estate sectors are seen as the main tools to achieve these development goals. According to "Emerging Trends in Real Estate Europe 2014", an annual forecast published by PWC and Urban Land Institute, Istanbul is still well-regarded for future developments (Gurlesel, 2015).

Judging by the last two elections in Turkey there is a divide in the country with around half of the population supporting the AKP and the other half supporting a range of more left and European leaning parties or Kurdish Nationalist Parties. This creates a high degree of polarization with Erdogan often ruling for his supporters rather than the country as a whole with the opposition parties opposing his every move. The polarisation is not only political but economic as well,

creating rival business networks with opposing political and organisational affiliations. The described political environment infringes essential communications between relevant actors in urban decision-making and the perceived fragility of the system avoids urban actors creating secure, long-term strategic vision for the future of the urban environment.

3.2. Istanbul and Urban Planning

Istanbul has gone through many large urban scale changes, and these changes have been particularly rapid in the last few decades, with a driver partly being the aspirations to become a global city. The changes can be particularly witnessed through a significant amount of large infrastructure projects, and the Government's persistent pursuit of urban regeneration, a planning method which has lost its credibility in many western countries due to its many negative consequences (Lovering & Evren, 2011). A complex interweaving of its own history and global determinations has been instrumental in shaping Istanbul's transformation, resulting in a city that is more capitalist, and less inclusive and accommodating of the poor and the new immigrants (Keyder, 2005, p.213).

Istanbul is highly vulnerable to earthquakes because it is located close to the Northern Anatolian Fault Line (the last two earthquakes in 1999 centred at Izmit and Adapazari, 100km to the east of Istanbul resulted in over 17,000 fatalities and influenced earthquake vulnerable districts of Istanbul as well). Rapid urbanisation has also lead to increased water and air pollution increasing the health risks posed to the population, although improvements have been made in recent years. It is also vulnerable to floods and sea level rise as a result of lack of planning and adequate infrastructure (GSAPP, 2016).

Enlil argues that "Istanbul's claim to be a global city sits uncomfortably alongside the fact that it fails to provide sustainable and liveable conditions for so many of its citizens. The major challenge for policy-makers (at local and national level) is to balance these two goals" (2011, p. 22). However, this balance seems not present in the AKP run city, Lovering and Evren argues that the "vision that currently dominates planning in and for Istanbul fails to recognize the importance of justice, of social inclusion and sustainability, and of the physical environment" (2011, p. 4).

There are 39 districts in Istanbul which each has their own governing structure overseen by the Istanbul Metropolitan Municipality (IMM) run by the AKP. The IMM makes the macro level decisions and the district municipalities take care of municipal services. This system has been

referred to as having "a powerful mayor and weak councils (Erder, 2009)." The districts often have different development regulations complicating the planning process, and there is also a lack of coordination throughout the system as a result of bureaucratic procedures (GSAPP, 2016). When the National Government, the City and the districts are run by different political parties the planning process gets complicated even further as the process becomes more politicized and results in fragmented governing and planning procedures.

Lovering and Evren argue there are more democratic tendencies present in the judicial system that offset the "anti-democratic" tendencies. Particularly predominant unions such as the Chambers of Architects and Engineers (TMMOB) and the Chamber of Urban Planners which sits under TMMOB, which often mediate or modify planning proposals (Lovering & Evren, 2011). Disputes over planning issues often end up in courts with suits brought either by the Chamber of Urban Planners or neighbourhood associations. However, in 2013, after the Gezi Park protests in which many members of the TMMOB took part, the AKP enacted a law in parliament, which stripped the TMMOB and the Chamber of Urban Planners of its power to approve urban planning proposals and transferred that authority solely to the Ministry of Environment and Urbanisation (NationalTurk, 2016). TMMOB can still bring planning proposals to the courts, but even if they win it rarely results in cancellation or significant changes in urban renewal projects. For instance, after the Chamber of Urban Planners' Istanbul office sued the Fatih Municipality's urban plan, the court decided to stop execution of Sulukule urban transformation project in the district. Nevertheless, the project was already started and finalised before the court's decision. The current status of buildings in Sulukule is therefore illegal. The Municipality still haven't taken any steps to demolish these buildings or propose alternative urban plans for Sulukule, which begs the question of whether the more democratic tendencies that Lovering and Evren outline still exist.

The Gezi Park protests in 2013 were one of the most significant events in Istanbul's recent history with regards to urban development. (Erder, 2009) argues that in 2009 the population of Istanbul were generally happy with the status quo and were not interested in participating in urban planning. But the Gezi Park protests might have marked a change that the Gezi and Taksim Square protests represented "a historical turning point, which shows that large numbers of people no longer are convinced by the government's rhetorical performance." (Poucher Harbin, 2014, p. 1) The protest started with a few protesters standing in front of bulldozers planning to start construction of a new government-sponsored complex incorporating a mall in the form of a replica of an Ottoman-era military barrack. Within a few days the protesters were joined by thousands, some of which were violent marginal groups (Özbudun, 2014), which led the government to implement a harsh

crackdown leaving eight dead and thousands injured around Turkey, over the course of three months (NextCity, 2014). To stop the by then nationwide protest, Erdoğan, then Prime Minister, cancelled the development and offered to hold a referendum. However, in 2015 municipality plans show that the development plans for Gezi Park are back on the table (TodaysZaman, 2015). In June 2016 Erdoğan vowed to rebuild the ottoman military barracks in Gezi park (HurriyetDailyNews, 2016).

Özbudun argues that the Gezi Park protests should not be seen as just an environmental or urban protest but: "rather, they were the spontaneous explosion of accumulated anxieties resulting from what was perceived as the government's increasing interference with the secular way of life and the arena of personal choice" (2014, p. 154). As a response to the protest (Göknar) makes the case that the AKP is using terrorism laws to silence political opposition, especially protesters and those that helped protesters at Gezi Park because: "In the eyes of the ruling party, it seems that any dissent is indicative of an attempted 'coup' against the government and dissenters can be charged accordingly (2014, p. 1)."

Çarkoğlu (2017) argues that public concern for environments is very low in Turkey and the theme of the environment " is clearly not very salient and hence of little electoral importance' in the country (p.172)." Paker (2017) shows that "developmentalism under the AKP is constructed on self-proclaimed environmentalism", where "the AKP representatives declare that they are real environmentalist (p.110)." Paker (2017) argues that AKP legitimizes tree-planting activities as a form of environmentalism, which presents "a false green image that completely glosses over the ecological costs of megaprojects. This is how the AKP co-opts environmentalism and turns it into empty signifier that may mean anything and everything (p.121)."

3.3. Urban Coalition in Istanbul

A key systemic driver of urban transformation is the free market economy and neoliberal politics in Turkey, implemented since the 1980s. By the AKP rule in 2000s, the neo-liberal economy in Turkey has increasingly incorporated Islamic references. Some authors address this neo-liberal direction as 'Islamic capitalism', emphasising Islam's entrepreneurial roots and the trend in the modern Muslim world to embrace neo-liberal development. This is partly because "extremism, and the political chaos it breeds, is bad for business (InsightTurkey, 2013). Turkey has been cited as one of the most successful case studies of 'Islamic capitalism' given the presence of skyscrapers and shopping malls next to Islamic-style new replica mosques. Bozdoğan argues that

these construction projects are "a nice summary of the entire AKP project… this idea of creating a country that's integrated with global markets, but that has a population that is conservative and Muslim and a consuming public (Poucher Harbin, 2014, p. 1)."

The construction industry, heavily supported by the AKP, is one of the main drivers of economic growth. The neo-liberalist agenda in Turkey and Istanbul has been said to lead to a 'constructocracy'(InsightTurkey, 2013), which means a system where the construction sector is the driver of the national economy. Under this system, the government's focus is to build bigger construction projects because they believe that these projects will lead to increased prestige and legitimacy (Poucher, 2014).

According to Adaman et al. (2017) the rise of energy and construction projects, and the corresponding reshaping of rural and urban space were marked with the AKP government and legitimised its power. The rises of construction and energy have seen two essential sectors, which helped Turkey's integration with global financial markets effectively than other sectors. According to Adaman et al. (2017), "… the uniqueness of these sectors lies in the particular products they deliver, products that will be directly and immediately consumed by the masses, including those that were dispossessed them. Furthermore, dams, bridges, highways, power plants and other monumental construction and energy investments resonate closely with modernisation in the social imaginary (p.247)."

This system has led to regular accusations of corruption and favouritism when it comes to awarding construction companies' government contracts (Economist, 2016). This neo-liberal construction driven economic system has been referred to as being driven by a powerful urban coalition which emerged in Istanbul in the 2000s and has resulted in the drowning out of the voices of the citizens and disadvantaged groups (Türkün, 2011). Türkün describes this coalition as: "Central and local government actors and bureaucrats working for important state institutions have become a part of the hegemonic neo-liberal discourse that sees urban transformation as properly concerned with increasing urban land rents and real-estate development. This discourse and the accompanying policy developments have also been strongly supported by the private sector, with property developers, land owners, advisors, professionals, and the leading media playing a major role in defining and legitimating this de facto urban coalition (2011, p. 62)."

The AKP has been a big part of this coalition due to their ability to change laws without having to make concessions due to their majority in the Parliament, which has led to "a dangerous

concentration and centralisation of power" (Türkün, 2011, p. 62). The strengthening of The Mass Housing Administration (TOKI) and the Privatization Administration have been key actions taken by the coalition and the AKP to enable the realisation of big urban projects and "urban regeneration/renewal projects" (Türkün, 2011). TOKI was established in 1984 by the Turkish government, with the mission to maintain a "right to housing" and this institutional role is based on an article in the Turkish Constitution, which states that "the State shall take measures to meet the needs of housing within the framework of a plan which takes into account the characteristics of cities and environmental conditions and shall support mass housing projects… (Turkish Constitution)"

TOKI has especially played a critical role in urban renewal of Gecekondu areas (squatter housing districts). In the 1980 they focused on increasing their rent-earning potential by giving pre-title deeds that could be transferred into official title deeds after issuing the development plans (Türkün, 2011). In the 1990s a more exclusionary and stigmatising tone from the government and TOKI resulted in demolition of Gecekondu districts and the displacement of its citizens allowing for urban re-development projects in the evacuated areas. In recent years, the system has changed towards creating incentives for large projects, which rapidly change urban spaces through laws that encourage organised and planned development and minimize earthquake damage risks. Türkün argues that these "legal changes have in effect eliminated former obstacles to large scale urban projects, which can be developed more easily as they need pay little attention to their integration into wider development plans"(Türkün, 2011, p. 64). He also says that "it is not controversial to conclude that neo-liberal urban policy in Istanbul has aimed to transform areas with high rent potential by evicting the inhabitants (Türkün, 2011, p. 69)."

3.4. The Role of Seismic Risk and The Law no.6306

Another key driver of urban transformation is the expectation and risk of a large earthquake that can potentially devastate the city, as Istanbul is located close to the active Northern Anatolian Fault Line. The Marmara earthquake in 1999 on this fault line, with its epicentre about 100km to the east of Istanbul, was an event that literally shook the Turkish government into realising that there was a crucial need to do something about the huge amount of poor quality buildings, especially in cities such as Istanbul.

Over the next 17 years, urban renewal and regeneration of at risk areas became the solution. The Marmara earthquake prompted over a decade long process towards implementing legislation

and restructuring public agencies to enable urban renewal, which accelerated after the Van earthquake in 2011, and culminated in the 2012 "Law of transformation of Areas under the Disaster Risks no.6306" (commonly called the urban transformation law). Renewal prior to this law was conducted under municipal laws and urban regeneration laws. The Ministry of Environment and Urbanization has declared an area of 1,106.25 hectares as "risky" (Gurlesel, 2015). The target of the urban transformation strategy is to renew 6.7 million houses in Turkey within the next 20 years. According to the Head of Turkish Real Estate Investment Partnership Association (GYODER), 2 million houses in Istanbul have to be renewed (Hurriyet, 2016). The demolition and reconstruction of old buildings would cost US$23 billion annually and US$465 billion in total (Gurlesel, 2015).

Urban renewal projects in Istanbul started in the 2000s, but were not numerous. However, the urban renewal projects that did occur were highly controversial as the key motivation appeared to be profit rather than improvement of the lives of the residents resulting in forced evictions of poor inhabitants and planned gentrification (Akcali & Korkut, 2015; Akkar Ercan, 2011; Dinçer, 2011; Enlil, 2011; Gundogdu & Gough, 2009; Lelandais, 2014; Lovering & Türkmen, 2011; Türkün, 2011; Uysal, 2012). The profit argument becomes quite obvious when you observe which areas were redeveloped first as they were not among the high risk areas identified in a 2002 JICA study, but areas close to the city centre and other key locations, with many of their inhabitants being poor and migrants like in Sulukule (Uysal, 2012) and Tarlabasi (Yilmaz, 2008).

The first redevelopment areas were not a part of formal planning processes and master plans and thereby lacked strategic and holistic approaches for the redevelopment of entire neighbourhoods. The aim was to build as many big profit making residential buildings as possible – and in retrospect their structural integrity has been questioned (Goksin, Yazici, & Tore, 2015). Due to this the redevelopments were met with large-scale resistance from its inhabitants including through filing lawsuits and conducting protests.

Goksin et al. (2015) argue that the negative experiences associated with the early redevelopments resulted in a reluctance by most mayors to engage in urban renewal projects, but that two main factors helped overcome the reluctance, "the negative impact of the global economic crisis on the volume of construction from 2008 and the Van earthquake in 2011" (Goksin et al., 2015, p. 15). Turkey's economy is highly dependent on construction, and many construction companies are closely tied to the government elite. Due to this fact, and due to the impetus and legitimisation caused by the 2011 Van earthquake, it is argued that the government quickly moved to develop "a legal and institutional framework to promote redevelopment activity which was

consistent with its overriding neo-liberal economic and political perspectives and priorities" (Goksin et al., 2015, p. 15).

4. GREEN GENTRIFICATION AND ENERGY EFFICIENCY IN ISTANBUL'S URBAN RENEWAL

4.1. Green Gentrification

Cities concentrate people, wealth, ideas and innovation (Bettencourt et al., 2007), but also the associated energy, material, waste and emission flows, and concentration is enabled by global trade of goods, and consequently global appropriation of environmental resources and ecosystem services (Hertwich & Peters, 2009; Galloway & al., 2007). From sustainability perspective, on the other hand cities face tremendous challenges; mobility, housing, energy and food demand, only to mention few. Urban sustainability became highly essential to achieve global sustainable development goals since it is expected that already by 2050 more than 70% of world population will live in cities (UN, 2014). The UN SDG goal 11, which aims to make cities and human settlements inclusive, safe, resilient and sustainable, raised attentions toward the importance of urban green spaces for mediating climate change related impacts (Cohen-Shacham et al., 2016). The recent researches on urban greening strategies and upgrading or revitalization of environmental amenities (Anguelovski, 2015; Checker, 2011; Curran&Hamilton, 2012; Frantzeskaki, Jhagroe, & Howlett, 2016) in urban areas indicate that what is being implemented on the surface is far from sustainability concerns, but generally market-oriented urban renewal strategies (Anguelovski, 2015; Sham, 2012). These raise concerns about green gentrification.

Gentrification is originally characterized as "the occupation and renovation or upgrading of dwellings in working-class inner city neighborhoods by the middle-classes" (Glass, 1964). In a broader sense, Smith (2002) defines gentrification as a return of productive capital investment to the city than simply a change in the class position of residents. This interpretation encompasses new building, planning, and tax code changes, changes in urban political government, new forms of consumption, and wider cultural shifts linked with neoliberalism (cf. Castree, Kitchin and Rogers, 2013).

It is argued that urban geographers have researched the social, economic, political, cultural, and spatial dimensions of gentrification for decades. Yet, the environmental dimension of gentrification has been ignored in urban gentrification studies (Bryson, 2013). Also, there are some studies that only question the relationship between the built environment and gentrification process.

For instance, Harvey (2005) describes built environment as " a vast, humanly created resource system, comprising use values embedded in the physical landscape, which can be utilized for production, exchange and consumption (p.233)" where he mentions green parks as urban natural elements. On the other hand, environmental history scholars (Hurley, 1995; Tarr, 1996; Melosi, 1999) have studied the relationship between nature and society in urban areas, where they concluded that the natural environment was essential for urban development. According to Isenberg (2006), these researchers neglected the social conflicts behind the transformation of urban environments, and ignored the role nature plays in the creation of urban areas.

The current urban scholars, whom introduced the term "green gentrification", have studied the linkages between the use of nature and gentrification in cities. For instance, the very recent study defines "green gentrification" as the revaluation of un-developed environmental resources by public or private investments, and "a process of creating and reinforcing environmental privilege for elites in the city (Gould and Lewis, 2017, p.13)."

Green gentrification generally occurs with actions implemented to improve public green spaces and/or to clean-up undesirable lands, such as brownfields, where the environmental upgrading revitalizes property values (Gamper-Rabindran et al. 2011) and closes the "environmental rent gap" (Bryson, 2013). These processes are termed as environmental gentrification (Curran and Hamilton, 2012; Checker 2011), green gentrification (Mukhopadhyay, 2017; Gould and Lewis, 2012), and ecological gentrification (Dooling, 2009; Quastel 2009). Eckerd (2011) argues that revitalizing the contaminated areas is not the only way to trigger green gentrification; specific environmental upgrade actions to create public spaces such as green areas (Checker, 2011), bike lane infrastructure (Lugo, 2015) may also contribute to green gentrification.

The current debates on green gentrification focus to understand the linkages between environmental upgrading and social inclusiveness, as researches show that less affluent citizens in the gentrified areas are the most vulnerable groups exposed to displacement after the improvements of green areas (Cucca, 2012; Dooling 2009; Gould and Lewis, 2017; Quastel, 2009; Haase et al, 2017). By giving an example from the Lene-Voigt-Park in Leipzig, Germany, where creation of a green space and social facilities revalued the housing stocks in the old working-class neighborhood and caused the displacements of socio-economically disadvantaged dwellers in the area, de Haase et al. (2017) highlights that greening may contribute to urban quality of life, but this does not mean that it also ensures social inclusiveness.

As the literature argues that the likely outcomes of greening public spaces and upgrading their decay conditions, as well as investing to social infrastructure results to green gentrification and trigger social exclusion, with our case study, the term might broaden its definition than what were studied in the existing literature. The Gaziosmanpaşa urban renewal planning approach reveals that green gentrification also appears through designating sustainable neighborhood and energy efficient-building concepts with international green certificates. Thereof, this thesis will analyse how the sustainability vision of Gaziosmanpaşa urban renewal lead to a green gentrification.

Energy efficiency and international green building certification become a prestigious sustainability targets in the lucrative residential projects of Istanbul, since the Energy Efficiency Law no.5627 was enacted in 2007 to promote energy efficiency throughout the various sectors in the country. Energy efficiency plays an important role in achieving energy independence, and also it has high potential for climate change mitigation. Turkish economy is comparatively energy intensive compared to OECD counties. Industrial sector constitutes 34% of total final consumption, followed by the residential/commercial sector (OECD, 2018) and the energy demand has been increasing over the last 15 years since the country aims to become the world's 10 biggest economies by 2030 (TSV-2023, 2008). Moreover, the EU acquis in the energy efficiency sector fits in well with Turkey's aim to be member of the EU since 2005 when the negotiations for full membership started (Tagliapietra and Zachmann, 2017; World Bank, 2015). Thus, there are both external and internal pressures of transition towards energy efficiency. From this standpoint, following section will highlight how the-EU-led and nationally endorsed energy efficiency is disseminated in the IMM and the construction related businesses in Istanbul. After this, we will examine our case study.

4.2. Energy Efficiency as a Mobile Policy

Since Turkey has adopted the EU energy efficiency agenda, there is an urge to energy efficiency in buildings, which comes from policy mobility and materialized as international green and energy efficiency building concepts in Istanbul's urban renewal. From this standpoint, the theory of policy mobility will allow us to assess how adopted energy efficiency is travelled and mobilized in Turkey, Istanbul and construction related sectors in the city, and specifically lead to green gentrification in the GOP urban renewal.

There are insightful arguments about the ways in which various policies have been mobilized between different locations (Peck and Teodore, 2015; McCann and Ward, 2011) and how these

policies are mutated and territorialized in places where they travelled (McCann and Ward 2012; Peck 2011).

Peck (2012) argues, "…rather than a mechanic process of replication, policy mobility is inescapably associated with policy mutation (p.23)." In this sense, nation states or city regimes are not the passive recipients of certain policy mobility; rather they transform these policies through their knowledge to fulfill their needs. But why do governments or city regimes need to adopt certain policy structures, which have been implemented in different geographical and/or political context? These adopted policies are also attributed as safe due to the fact that they have been formed and approved through collaborations and consents from the supranational and/or international organizations. Moreover, certain policy models are not necessarily taken for emulation, rather they appear as inspiration for other countries or cities to follow, such as Barcelona model of urban regeneration (McCann and Ward, 2010).

The arguments on the policy mobility literature generally agree the idea that the outcome of a specific policy depended on the place, where is adopted and its impact also contextually specific. Peck and Theodore (2010) call it "all policies are local". As policymaking is understood as both relational and territorial (McCann and Ward, 2011), the effectiveness of transferred policies is also dependent on local institutional and economic conditions (Peck and Theodore, 2011). The adoption of mobile policies can, therefore, be contested due to the changing power structures and relations among different stakeholders during the implementation of the top-down policy transfer (Dussauge-Laguna, 2013; Liu, 2017). Liu (2017) argues that "…contestation can happen between multiple parties across multiple scales, both transversely and vertically through a hierarchy of interests (p.899)."

In Turkey, the presence of policy mobilities from the EU or IMF directives should be regarded as one of the most influential policy-making especially in economic, social and environmental reforms that have taken place over the past two decades. Specifically, in order to mobilize the energy efficiency policy in the building sector, Turkey has set up the regulatory and institutional framework to promote energy efficiency in buildings such as the Building Energy Performance (BEP) Regulation and the 2011 Energy Performance Certificates (EPC). The EPC will be issued to all buildings by 2019 and the country aims to decrease annual energy consumption in the buildings and premises of public institutions by 10% by 2015 and by 20% by 2023 (NCCAP, 2011). Turkey has 17,6 million building stocks (TCIP, 2018), and as of December 2017 the total number of buildings with energy efficiency certificate are 642,709 (BEP-TR, 2017).

Table 4.1. Number of Buildings with Energy Levels in Turkey and Istanbul (BEP-TR, 2017).

Energy level	Turkey	Istanbul
A	2,209	732
B	217,212	51,476
C	411,768	74,962
D	8,573	1,242
E	1,775	110
F	497	29
G	673	62
Total	**642,709**	**128,613**

The current building stocks with energy efficiency certificate in the country is still below the 2015 target. The minimum C level energy standard is mandatory for all existing buildings and prerequisite for new buildings to be licensed (BEP-TR, 2017). There are also national acts and regulations that are compatible with the promotion of energy efficiency in buildings namely the recently launched National Energy Efficiency Action Plan (NEEAP) for 2017-2023 and Turkey's Climate Change Strategy and the National Climate Change Action Plan (NCCAP) 2011-2023.

Turkey has also signed COP21 Paris Climate Agreement in 2016, but has not ratified to make any commitment to reduce GHGs. The country's main goal is to increase economic growth; therefore following the international mitigation agenda to reduce emissions is seen as an obstacle to economic development. Mr. Albayrak, the Minister of Energy and Natural Resources, has recently stated that Turkey will prioritize its coal resources to compensate for the country's energy demand (Enerji Enstitusu, 2016). In Turkey, most of the CO2 emissions from fuel combustion relate to coal use, namely 43%, and coal is already used across the economy, mainly in power generation and industry, both being large emitting sectors (IEA, 2016). According to Acar and Karakas (2016), Turkey promotes domestic hydropower and coal-based energy production to overcome its growing account deficits resulting from oil imports. The goals indicated in the 2011 NCCAP are incompatible with the coal-based growth model that put Turkey's energy efficiency targets in limbo. As development agenda dominates environmental policies, the state ignores environmental destructive activities. Adaman and Arsel (2010) claim that "the consumption of natural resources, especially in relation to development efforts is another notable heading under which environmental problems appear".

Air quality is already an increasing concern in Turkey, notably in the large cities, stemming from emissions in the energy sector, coal combustion in residential, industrial heating and power generation, maritime and road transport and industrial processing. Around 97% of the urban population in Turkey is exposed to levels of particulate matter (PM10, PM2.5), which are the highest in Europe (EEA, 2013). According to Krellenberg (2014), the national and local governments in Turkey still need more comprehensive work to address the awareness and knowledge of climate change and response to it.

4.3. Energy Efficiency in Istanbul's Urban Renewal

Istanbul hosts one-forth of the country's population in its 3,6 million building stocks (TCIP, 2018), achieving energy efficiency in the housing sector would immensely contribute to decrease the carbon footprint in the city. As of 2017 the total number of buildings with energy efficiency certificate is 128,637 (3.5%) (BEP-TR, 2017) in the city. The income and living conditions survey conducted by Turkish Statistic Institute (TUIK) in 2015 highlights that the most important problem in the housing stock of Turkey is the lack of insulation in the housing units, which cause inadequate heating (TUIK, 2017).

According to the IZODER (Association of Thermal Insulation, Waterproofing, Sound Insulation and Fireproofing) Perception Survey, only 9% of consumers had insulation in their residential buildings. Also, the fact that insulation material consumed per capita in Turkey is 10 times less than Europe clearly demonstrates the main reason for the energy loss in the buildings. (NCCAP, 2012, P.21). The building stock before 2000 consumes double the energy envisaged by existing regulations even when only the presently applicable building standards are concerned. Energy efficiency potential for buildings, according to the General Directorate of Electrical Power Resources Survey and Development Administration, is 35% and with 10 million more residences to be insulated, the cooling and fuel savings until 2023 are estimated to be 2,400GWh and 2.3 million TEP, respectively.

The EU-led and nationally endorsed energy efficiency agenda and targets seems to inspire the Istanbul Metropolitan Municipality (IMM) to realize that there is a crucial need to make the city visible in the international arena and enable climate and sustainability funding opportunities by being part of the global networks such as C40, ICLEI and the Compact of Mayors. Since 2016, Istanbul has set ambitious goals become a "climate friendly city" (İCCAP, 2016) and the Directorate of Environmental Protection under the IMM is authorized to prepare Istanbul Climate

Change Action Plan, guided by C40. Along with other climate change strategies in the plan, accelerating the usage of energy efficiency appliances in the buildings of Istanbul is emphasized. This ambitious plan intends to provide special municipal incentives for higher energy efficiency levels and solar roofs on buildings (İCCAP, 2016).

There are concerns among the urban planners and environmental engineers about the implementation and the outcome of the Action Plan. A municipality officer from the IMM stated that:

"This plan will be a non-binding document and in Istanbul what gets implemented is ultimately decided by populist politics (interview with the Directorate of Environmental Protection, 10 January 2018)*."*

Another municipality officer asserted that:

"The IMM strategy and planning departments in the IMM are often regarded having little influence on the outcome (interview with the Urban Planning Department of the IMM, 12 January 2018)*."*

One urban planner corroborated this by saying that:

"The strategic and action plans in Istanbul are like public relations documents and rarely gets implemented (interview with the Chamber of Urban Planners Istanbul branch, 20 April 2017)*."*

As the percentage of energy consumption and the intensity of construction permits are the highest (Turk Stat, 2018) in Istanbul, several energy efficiency companies as well as international financial institutions and national and international NGOs are taking an active role in pursuing energy efficient and low carbon actions in the city's housing sector.

For instance, the European Bank for Reconstruction and Development (EBRD) and Austrian Development Bank has provided energy efficiency loans, predominantly for Istanbul, being transferred through Turkish Banks (GEF, 2012). Within this financial mechanism, the international financial institutions entered to the construction projects in Istanbul and support to broaden energy efficiency in residential buildings (Krellenberg and Turhan, 2017). For instance, the energy loans are only received if the product is purchased and approved by the member company of the

IZODER. Since then, "insulation materials" are promoted to the most efficient way to achieve the energy efficiency in buildings, which boosted the insulation material sector.

The globally known certification schemes, like BREEAM (the BRE Environmental Assessment Method) and especially LEED (Leadership in Energy and Environmental Design) have become dominant in the housing sector of Istanbul (Ünal, 2014), and the numbers of certified buildings are increasing. According to USGBC (The US Green Building Council), as of December 2016 Turkey has ranked the 7th on the list of top 10 countries for LEED certified buildings with 191 projects (USGBC, 2016). The LEED-certified buildings in Istanbul are predominantly commercial buildings such as offices and shopping malls.

The Turkish Green Building Council (ÇEDBİK - Çevre Dostu Yeşil Binalar Derneği), which comprises the country's 120 national and international leading Architecture, Engineering and Construction (AEC) industries that have growing interest in the energy efficient and green building focus. The ÇEDBİK engaged with the Ministry of Environment and Urbanization to develop the 2017 Green Building Regulation for Buildings and Settlements, a national green certification scheme to compete with international green building certificates.

There are few insulation material and chemical companies in Istanbul that are particularly involved to urban renewal in the city and interested in sustainability and energy efficient buildings. Despite the sense of hopelessness that many expressed, all of the stakeholders had options and ideas about how to create a sustainable and energy efficient Istanbul. A staff member at BAUMIT argued that:

"Energy efficient buildings are the first steps for sustainable cities but these have to be real efficient buildings, not just a marketing strategy (interview with BAUMIT Construction Material Company, 22 September, 2017)*."*

An engineer from CEDBIK argued that:

"I think the greenest building is the one, which is not built yet (interview with CEDBIK, 12 September 2017)*."*

Several stakeholders shared the assessment that awareness about sustainability and urban transformation is very low in Istanbul and therefore needs to be increased.

As one staff member of BASF said:

"The awareness level is very low. Istanbul is in a relatively good position in terms of education level, however having a higher degree does not mean awareness and respect for environmental issues (interview with BASF Chemical Company, 14 September 2017)*."*

The lack of collaboration and unity between different parties and organizations was also highlighted by many as necessary to achieve a sustainable Istanbul as the current political polarization is not conducive to working together to solve the big issues the city is facing. One stakeholder from TURKYTONG said that:

"People have to sit by the same table to negotiate on sustainability. NGOs, government and private sector should agree on the same argument (interview with TURKYTONG Insulation Material Company, 15 September 2017)*."*

There was also a call for local governments having to "position itself above politics", from the Kreatif Architect Company staff member said that:

"NGOs should be present on the Metropolitan Municipality Council to represent citizens and protect their rights as they could be less political (interview with Kreatif Architect Company, 12 October 2017)*."*

Another staff member from BAUMIT said:

"When it comes to implementing a sustainable Istanbul with respect to recycling, children, who collect papers from the containers, are working harder than the municipality (interview with BAUMIT Construction Materials Company, 22 September 2017)*."*

The need for environmental regulations and their enforcements was also highlighted as necessity to achieve a sustainable Istanbul. Another BASF staff member argued that:

"Regulations, considering energy efficiency, waste management, water management, air pollution and emissions, which are essential for environmental point of view, have to be obligatory to all (interview with BASF Chemical Company, 14 September 2017*)."*

Along with the big businesses in the housing sector of Istanbul, there is a growing start up environment in the city that cover different types of services and technologies aiming to contribute to energy efficiency in the buildings. These start-ups are predominantly founded since the past 2-3 years and based at an incubator, known as TechnoParks, at the Istanbul Techinical University and Yildiz Technical University in Istanbul. They are supported through consultations with academics and experts in businesses. The Individual Young Enterprise (BIGG) capital support program, which is developed by The Turkish Scientific and Technological Research Council (TUBITAK), provides grant support and technical assistant (from its academic board) to early start-up companies with innovative ideas.

The start-ups' efforts focusing on energy efficiency currently do not resonate well with the on-going urban renewal in Istanbul. The entrepreneurs from the incubation spaces shared the opinion that awareness about energy efficiency is very low in Istanbul and therefore needs to be increased. One entrepreneur stated that:

"No one wants to make additional expenses to their residential projects. Basically they will not care about the energy efficiency because the developers could not sell their apartments in this economic situation (interview with TURKECO company, 14 March 2018)*."*

Also, the current political environment concerns the entrepreneurs especially to make agreement with local partners here in Istanbul. One entrepreneur clearly stated that:

"If we have had personal ties with local and national governments, we would easily have engaged to the large-scale urban renewal projects in Istanbul (interview with VACUARC company, 14 March 2018*)."*

For Istanbul, our research shows that the IMM became part of energy efficiency related global networks and collaborated with them to commit energy efficiency and climate change goals. On the surface, Istanbul hosts delegations from European countries to learn about their innovations, also municipality professionals travel other exemplary cities to see their success. For long-term, this collaboration will eventually make a positive impact for the city, if the implementation of the policy-outcomes are succeeded. The case also indicates that powerful national policy actors easily interrupt the local policy decision-making process in Istanbul.

In terms of opportunities to establish energy efficient businesses, it should be indicated that the EU-led and nationally mobilized energy efficiency agenda was the main driver for such businesses in Istanbul. Yet due to the lack of enforcement in regulations and willingness to achieve energy efficiency targets, the on-going seismic-risk driven urban renewals in Istanbul do not provide real platforms for these businesses to operate and implement best practices in terms of energy efficiency. In long-term, this hinders the newly established energy efficient businesses model to thrive with the ongoing urban renewal in Istanbul.

The analyses provided in this section will shed light on the following section, as we aim to highlight to which degree the energy efficiency regulations in buildings integrated to the seismic-risk driven urban renewal in the district of Gaziosmanpasa, Istanbul. Considering mobilized-energy efficiency with the on-going urban renewal, we will argue that certain neighborhoods in the GOP district become the focus of green and energy efficient and lead to green gentrification**.**

5. URBAN RENEWAL IN GAZIOSMANPAŞA DISTRICT

Gazisomanpaşa (GOP) of Istanbul is the 9th highest populated district in the city (See Figure 1) with its 499,766 inhabitants (TurkStat, 2016) 16 neighbourhoods, and 11,73 square km area. The district is located in the middle of the European-side of Istanbul and is surrounded by the central business and trade hinterland of the city.

Figure 5.1. Istanbul showing the location of Gazisosmanpasa District (GOP District Plan, 2015).

The district is located close to the city centre and has good connections to highway networks and two bridges on the Bosphorus, and will be further improved when the underground railway network is finished sometime between 2016 and 2019. Highway connections will also be made to the third bridge on the Bosphorus which is currently under construction. In 2007 the district was divided into three and there are now around 500 000 residents there. Half of the population of the district is under the age of 20 and there is high unemployment and crime rates. Out of the 1106 hectares that are classified as earthquake risk areas in Istanbul 432 of them are in Gaziosmanpaşa, although they are mostly medium rather than high-risk areas. This constitutes 36% of all regeneration areas in Istanbul making it the largest in the city.

Gaziosmanpaşa became its own district in 1963 when it was separated from Eyüp. Settlement in the district started when the government in the 1950s gave refugees from Bulgaria and Yugoslavia land to settle there. After this, illegal settlements started with the building of squatter's house (gecekondu in Turkish) turning it in to the second largest gecekondu area in Istanbul. In 1992

the municipality implemented an Improvement Plan where they gave title deeds and pre-title deeds and made infrastructure improvements in the gecekondu areas.

Table 5.1. The urban renewal indicators of Gazisomanpaşa (Usta et al. 2015).

Area of the district	1,173 hectares
Total population	~500.000
Total parcel area	8,150,389 m2
Total building number	31,315
Number of streets	1,581
Total independent housing	164,133
Total workplaces	27,596
Total constructed area	14,175,000 m^2

Usta et al. (2015) argue that there are many reasons to implement urban renewal in the district: unhealthy housing areas; nonstandard equipment areas unable to address the populations requirements; insufficient road networks leading to high traffic density; high density of illegal slums in bad condition; there is a need to decentralise the industrial areas of the district; and there is weak integration between the district and the Istanbul Metropolitan area. The Gaziosmanpaşa municipality applied for the five existing areas to be re-designated and a further 7 added as urban renewal areas (URAs) after the 2012 urban transformation law was enacted. This involved around 8000 buildings, 12000 units, and 66 000 people (Goksin et al., 2015).

5.1. The Vision of Energy Efficiency and Sustainability (2013-2015)

The current Mayor of Gaziosmanpaşa is undertaking a PhD in Land Management and Land Use at Okan University and in association with this has co-authored a conference article about the urban renewal of Gaziosmanpaşa. The Mayor and his co-authors claim that the locals in GOP participate in all processes of the project (Usta et al., 2015). The Mayor, has said he will no longer

accept the vision of previously renewal projects, which have mainly involved around parcel-based renewal of housing and industrial buildings and no associated infrastructure, green living spaces, educational or religious buildings or services, as the below quote highlights:

"The urban regeneration project includes rebuilding and restructuring of all public services such as electricity, gas, infrastructure, illumination, roads, schools, mosques, green areas, transportation and etc. Sometimes, private companies want to hold all the responsibility and manage the project. As a municipality, we response them by saying "If you want to be in charge of the project, you should rebuild all the neighbourhood." That's the way it should be, then. Otherwise, the neighbourhood would be without roads, mosques, green areas and infrastructures needed. Right now, this city cannot fulfil the needs of its citizens. This project aims to transform the city by providing all the services and facilities needed, Hasan Tahsin Usta, Mayor of the Gaziosmanpaşa Municipality (Çamlıbel, Alhanlıoğlu, & Uğurlu, 2015, p. 1)."

The GOP occupies 11,73 sq km area and the partially planned urban renewal projects that have already been initiated by the developers cover 3.92 sq km. Since the urban renewal process started in 2015, negotiations were completed with 1684 buildings and agreements have been made with 2809 people with a total of 1378 building having been evacuated and demolished. Usta et al. (2015) claim that the result of the regeneration will be positive on the district as:

- Educational areas will increase up to 58 %
- Cultural areas will increase up to 4 %
- Green spaces will increase up to 114 %
- Administrative areas will increase up to 16 %
- Sanitary areas will increase up to 20 %
- Religion functions will increase up to 83 %
- Number of parking slots will increase up to 382 %

Further stimulating the economic growth in construction sector, the international organizations and construction and material companies in Turkey, building on their EU experience, served as early innovators and adopters of green building and construction guidelines (Mollaoglu et al., 2016). In parallel, interests to the international building certification for high-class residential projects have emerged in Istanbul (Cetik, 2014). The majority of developers in Istanbul, who are implementing residential projects for high-income groups, work with international architectural design companies, dominantly from the UK and the US.

In GOP case, an architectural design and engineering firm Foster&Partners designed the district's integrated master plan. The district has adopted a 'sustainable planning' vision to be engaged into the district's urban renewal process, with creation of a LEED Neighbourhood which also complies with the 2008 Energy Efficiency Law (Usta et al. 2015) that requires at least C level energy efficiency for all buildings. This vision, if realized, could help Istanbul mitigate to anthropogenic climate change through investments in sustainable buildings combined with a significant increase in green spaces and social infrastructures.

Figure 5.2. Foster&Partners' master plan for Gazisomanpasa district (The World Cadastre Summit, 2015).

5.2. Key actors in Gaziosmanpaşa Urban Renewal

This section outlines the key stakeholders involved in urban renewal, particularly those engaged in green practices such as energy efficient buildings and highlights their relationship to each other. The stakeholder mapping below depicts the relations between the identified actors of urban renewal projects, focusing on the GaziOsmanpaşa case.

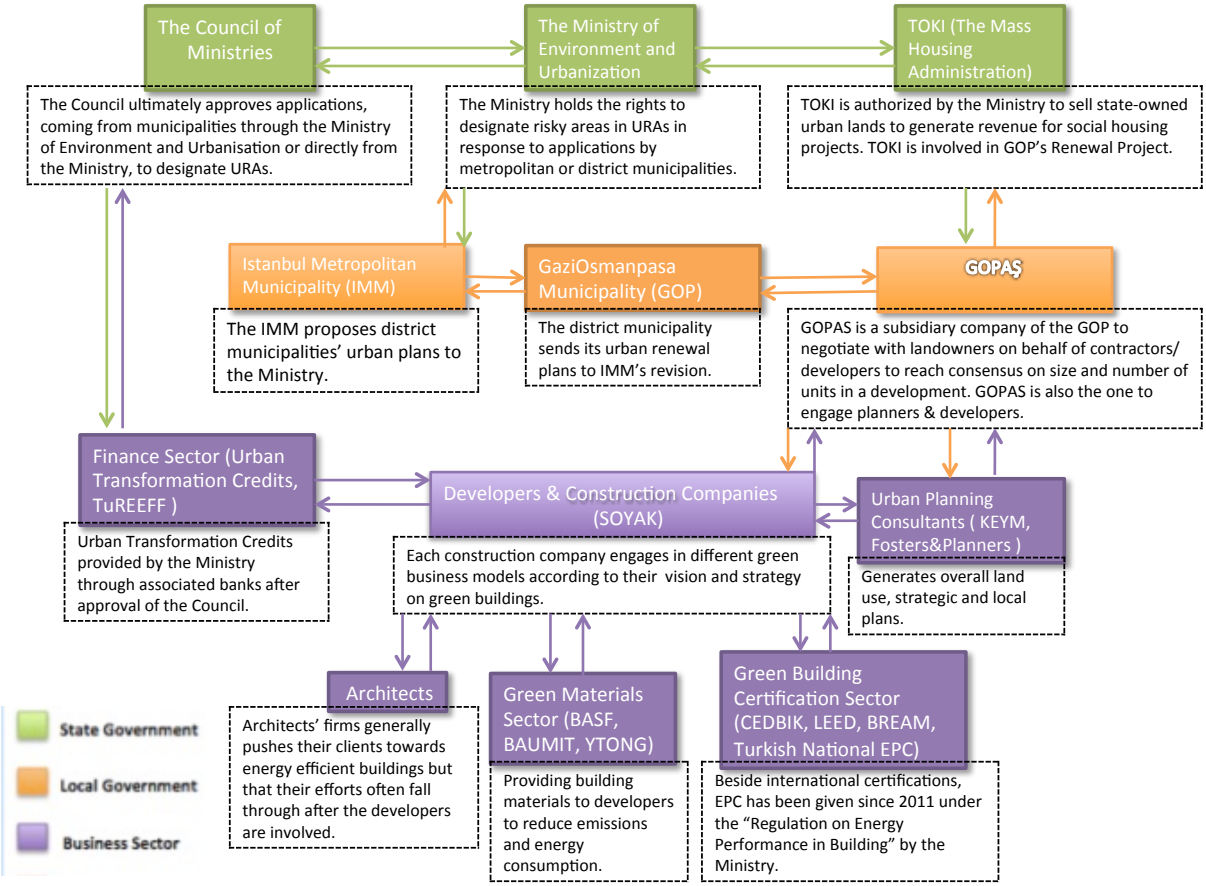

Figure 5.3. The key stakeholders involved in the Gaziosmanpaşa urban renewal.

The urban coalition defined by Turkun (2011), when scaled down to GOP, embodies the Ministry of Environment and Urbanisation (MoEU), The Mass Housing Unit (TOKI), and the GOP Municipality in the process of urban planning, land distribution, and the commissioning of construction activities in the implementation of the urban renewal in the GOP district.

5.2.1. The Council of Ministers and The Ministry of Environment and Urbanisation

The Council of Ministers, chaired by the Prime Minister, is the one who ultimately approves applications, coming from municipalities through the Ministry of Environment and Urbanisation or directly from the Ministry, to designate URAs according to the law no.6306. It's unclear whether they have ever gone against a recommendation from the Ministry.

The Ministry of Environment and Urbanisation is in charge of overseeing all urban planning in Turkey. The 2012 Urban Transformation Law transferred most of the power regarding urban renewal to the Ministry of Environment and Urbanisation. It holds the rights to designate risky

areas in URAs in response to applications by metropolitan or district municipalities. The ministry also has the power to designate "reserve areas" where new neighbourhoods can be developed to accommodate residents who cannot be accommodated in the URAs, with the reserve areas often located far away from the city centre. They also have the power to order the demolition of "risky buildings". The law requires resident participation but only with respect to developers and construction companies' negotiation with owners. The law can re-designate existing urban regeneration areas from previous laws.

The MoEU holds the rights to designate the district as "vulnerable to earthquake", and in 2013, through the Council's approval, 12 neighbourhoods in the GOP district were declared as "vulnerable to earthquake" by the Council of Ministries according to the Law no.6306. In 2015, the MoEU approved the GOP urban renewal master plan.

5.2.3. The Mass Housing Administration (TOKI) and GOPAŞ

TOKI is founded in 1984 in order to provide affordable housing and to regulate rapid urbanization in Turkey. During the 1980s and 1990s, TOKI played a crucial role in Istanbul's urban expansion by providing credit to housing co-operatives. Since the AKP came to power, TOKI is restructured as "the most powerful real estate developer in the country and the most influential actor in constructing a neo-liberal regime (Kuyucu, 2010, p.7)." The Ministry of Environment authorizes TOKI and Urbanization to sale state-owned urban land (excluding military land), to develop zoning projects in state-owned lands to construct housing for profit, and to expropriate public properties in Gecekondu areas. TOKI either construct profit buildings by its subsidiary firms or through public-private partnerships in order to generate revenues for its "social housing" constructions. It is indicated that between 2003 and 2008, TOKI constructed about 340 000 housing units, 50,000 of which are in Istanbul, 317 trade centres and 30 hospitals, in addition to numerous other structures (Kuyucu, 2010).

In the instance of Gaziosmanpasa, after an urban renewal area has been approved, the District Municipality authorized TOKI and GOPAŞ, which is a subsidiary company of the municipality, to carry out the negotiations with landowners and residents on behalf of private developers to reach consensus on size and number of units in the residential projects.

TOKI and GOPAŞ's involvement to the GOP case is mentioned by one of the interviewees from an urban planning company. According to his statement:

"As the majority of urban residents cannot afford to hire a developer to rebuild their property in GOP district, residents especially those who live on financially valuable lands are forced to negotiate with the TOKI and the district municipality-owned construction company, GOPAŞ, to transform their buildings into new apartment complexes (mostly high-density apartment units). Depending on the rent value and land status (public or private), either TOKI or GOPAŞ implement the construction activities through their subcontracted developers. After the subcontracting, GOPAŞ acts like a facilitator of the negotiations between the locals and private developers for their shares on the redeveloped property (interview with a private urban planning company, 7 March 2018)."

5.2.4. Construction and Energy Efficiency Businesses

Our interview data suggest that there are few construction and construction material companies in the GOP urban renewal that are particularly interested in sustainable and energy efficient buildings. In May 2016, we have conducted interview with the CEO of SOYAK Construction Company. The company was involved one of the residential projects in the GOP, and we have found that in 2018 the company cancelled the its contract with GOPAS. It's unclear why the company has no longer interested to involve the construction activity in the district, yet according to our interview data, the previous CEO of SOYAK argued that:

"The sustainable city must be sustainable in ecological sense, social sense, and in order to be sustainable it must attract employers, skilled people, and mobilize capital. Yet, sociological, economical, ecological perspective Istanbul isn't in a good place for sustainability (interview with SOYAK Construction Company, 18 May 2016*)."*

"The most important aim for sustainable urban transformation must be designing green-ecological cities" and quoted Gaziosmanpasa as an example of this (interview with SOYAK Construction Company, 18 May 2016)*."*

Yet, the underlying idea of this sustainable aim was not only about introducing new green spaces to the whole residents of GOP district, but predominantly increase the market value of the new buildings as researchers show that greening strategies are used as a tool to improve residential qualities in decayed urban areas (Birch and Wachter, 2011), and the increase (both qualitative and

quantitative) in green spaces positively effect the price and location assessment of housing (Kolbe and Wüstemann, 2014).

For instance, an entrepreneur from a start-up stated that:

"Energy efficient buildings are the first steps for sustainable cities but that these would have to be real efficient buildings not just an element of a marketing strategy. The developers only implement green buildings on highly profitable lands, low profit lands it is not profitable to do so. As the developers are the ultimate decision makers to use our products to elevate the energy efficiency level of a building, due to lack of binding legislations to upgrade energy efficiency levels, we do not reach out to the individual costumers (interview with GREENCOAT Insulation Start-up company, 14 March 2018)."

5.3. The Change in Planning: Parcel-based Green Gentrification (2016)

According to an urban planner: *"the current Mayor altered the Foster&Partners' master plan before it was sent to the MoEU for approval (interview with the chairman of the contracted urban planning company, 10 January 2018)."*

During our interview GOPAS, one of the staff member highlighted that they had to change the plans because *"the masterplans did not comply with all the zoning regulations (interview with GOPAS Company, 17 May 2017)."*

However, according to the contracted urban planning company, *"the master were altered by the current Mayor to increase population density and housing ((interview with a staff of the contracted urban planning company, 10 January 2018)."* This has resulted in the planning company and its international team withdrawing from the project and insisting on their name no longer being on the plans.

The Chamber of Urban Planners Istanbul branch also sued the approved plan in December 2015, due to its discrepancy with the master planning criteria according to the Law on Land Development Planning and Control no.3194.

Table 5.2. Gaziosmanpasa master plan versus the urban planning (the law-case document provided by the Chamber of Urban Planners Istanbul Branch).

Recreation Type	**Size (m^2)**	**m^2 / person**	**The minimum standards according to the law no.3194**
Educational Facility Areas	254,207	1.15	1.60
Health Areas	57,718	0.26	1.5
Religious Facilities	66,328	0.30	0.5
Socio-Cultural Facilities	29,318	0.13	0.75
Parks/Promenade/Recreation Areas	675,502	3.09	10

According to the law-case document, the master plan only designed for 30% of the GOP district, which divided the urban renewal areas from the existing neighbourhoods. The earthquake risk assessments in the altered plan according to the Law no.6306 also has also found technically and scientifically inadequate. According to litigation document, the master plan lacks of adequate recreational facilities without considering the population increase in the district. The plan also increases the population density without having enough space for recreational areas. The plan only provides 31,9% of the Regulation's requirements.

The plan also does not identify the sizes and the locations of the recreational facilities in the identified neighborhoods. The distributions of the recreational facilities do not consider the population density and the connectivity between the different neighborhoods. This disintegration interrupts the balance of recreational facilities and paves the way for arbitrary applications.

When the transformation is a piecemeal parcel based approach where construction companies, for instance, tear down a four story building and build an eight story building in its place it puts pressure on the infrastructure of the neighbourhood. Because of this approach, many of the stakeholders argued that urban renewal needs macro plans on a neighbourhood, district, city and country level rather than parcel based renewals. One of BASF staff members said*: "one green building doesn't mean anything* (interview with BASF Chemical Company, 14 September 2017)*."*

A staff member at BAUMIT highlighted this infrastructure problem by saying that:

"The problem of urban transformation is high-rise buildings. Infrastructures remain old;while they built new housing units. The lack of infrastructure planning is a major problem (interview with BAUMIT Construction Material Company, 22 September, 2017)."

5.3.1. Self- Organisations against the GOP Plan

After the GOPAS has set up field offices to facilitate negotiations with the residents through a contracted private urban planning company in order to make agreements with landowners upon the new flat sizes and the number of housing units to be provided after the urban renewal is completed, this then ultimately resolve the conflicts that may emerge out from the complicated property ownership in GOP before the urban renewal project has started.

There are two fundamental rights to property in GOP: titled deeds (*tapu*) and title assignation document (TAD, *tapu tahsis belgesi)*, which is non-tradable and recognize the dwellers' rights to use the occupied lands given by the 1984 Amnesty Law no.2981 to all owners who built squatter houses on the state-owned lands before 1984. The TADs can be issued as titled-deeds by the local municipality only after the same authority designates a "cadastral plan" or "improvement plan" for these lands. There are also occupiers with no rights, and an unknown number of tenants reside in this legally complex lands.

Depending on their property and the market value of the renewal project, rightful owners are offered either certain amount of per cent of their existing property after the project's completion, or fully monetary compensation for their property's current value. In the case of TAD owners, who have not attained fully legal status, offered a demolition value for their existing building, instead of the full value of the land and the building.

The property negotiations have generated a strong negative reaction among the dwellers, resulting in the formation of "Gaziosmanpaşa Neighbourhood Association" to lead the resistance. The Chamber of Urban Planners help the neighbourhood associations that have formed in Gaziosmanpasa to protest and file lawsuits against the plans. According to a board member of the Chamber of Urban Planners;

"Tensions are running high with the Chamber also suing over the plans (interview with the Chamber of Urban Planners Istanbul branch, 20 April 2017)*."*

Firstly, the public discontent emerged with the "vulnerable to earthquake" decision of the Council of Ministries (with law no 6063) and property allocation by the GOPAS, and mobilized the Association. The Association sued the decision and in 2015, and ultimately the Council of State has cancelled the earthquake-risky area status of 4 neighbourhoods (Yildiztabya, Pazarici, Mevlana and Karayollari) in the GOP district. In long-term, this has delayed the implementation of the urban renewal projects in the district. Thereof, in 2016 the GOP Municipality started to implement fast-track land expropriations (referring to the Law of Expropriation no.294, Municipalities are authorized by the Council of Ministries) with compensations in order to accelerate the construction activity mostly in neighbourhoods, where negotiations take longer due to the complex land ownerships.

This eventually formed a systematic social exclusion in the process of urban renewal in the district. GOPAS eventually made a protocol with TOKI and private developers on the land distribution and revenue shares in the district. The Association sued the fast-track expropriation decisions (the case is still ongoing) due to the fact that *"there is not any extraordinary conditions that legitimize such legally binding decision on the private properties* (interview with the Chamber of Urban Planners Istanbul branch, 20 April 2017*)."*

After the Chamber's lawsuit in 2015, the Council of State cancelled the plan in 2016. After the cancelation of the plan, the GOP municipality has started partially to plan the urban renewal projects through the subcontracted developers, which are initiated through TOKI and GOPAS, in the different locations of the district.

According to a land valuation expert: *"the lands in the GOP, which are designated to be seismic resilient, are divided into two segments* (interview with a private urban planning company, 16 November 2017)*."*

The following section will highlight how this two level land-division is embodied in the Merkez and Karayollari neighbourhoods of GOP urban renewal. For the following section, our focus is to understand social exclusion through green building practices and sustainable neighborhoods with green spaces. Creating green residential areas, and excluding others who cannot afford to benefit from these green amenities might also be considered as a form of social and environmental exclusion for this thesis. This approach limits the potential sustainability aims of Gaziosmapaşa urban renewal project, and results in green gentrification due to partially "greening"

only the designated parts of the district on the one hand, and creating social and environmental exclusion on the other hand.

5.3.2. Merkez Neighborhood

The first segment is the lands of the southwest part of the district (Merkez neighbourhood), which is close to Istanbul's trade centres. The developers expect higher revenues from this area due to the fact that the area is well located in relation to the main transportation and highways in the city, and offers a Golden Horn River view. The "WE-HALIC" in Merkez neighborhood (See Figure 5.4), for instance, will be the first apartment complex project, which aims to get international green building certificates such as LEED and BREAM to achieve commercially success. According to the sales management of the project; "WE-HALIC will be the first urban renewal project with environmental friendly green building certification (EmlakKulisi, 2017)."

Figure 5.4. The picture in left-side (taken by the author) shows the construction site of WE-HALIC project. The picture in left-side is captured from the envisioned outcome of the WE-HALIC project. (www.wehalic.com).

The project offers the Golden Horn river view and historical peninsula silhouette in the high-rising luxury residents by 2019. The project is held by GOPAS and a private developer, and aims to get LEED-Neighborhood and LEED GOLD with clear green neighbourhood vision (energy efficient buildings, utilizing grey water, green roofs, renewable energy generation) and social facilities by increasing in green and liveable spaces with all necessary infrastructure, like schools and mosques. The project's green and energy efficiency vision make its contribution to larger parts of the dwellers questionable, and it is clearly seen from the Figure 5.4 that the parcel-based

sustainable project is settled in the middle of the squatter houses and old housing stocks, which ultimately results in the socio-spatial segregation with green walls.

5.3.4. Karayolları Neighbourhood

During our interview with the head of GOPAS regarding to what degree green buildings and energy efficiency are considered in the urban renewal process in the district, he clearly stated that : *"High-level energy efficient green building appliances are costly. Due to this, the construction companies with less capital were not forced by the authorities to implement these appliances in their renewal projects regulations* (interview with GOPAS Company, 17 May 2017)*."*

This is also the case for the second renewal area, Karayollari Neighbourhood, which is on the mid-north of the district near by the highway. The land in this area is already valued due to the investments in apartment complexes in 2009. This existing high value development served to inflate market prices of the housing units for the new renewal project. The newly invested vacant land is provided by TOKI to a private developer. The commissioned developer will build a gated-residential complex similar to the existing buildings (see Figure 5.5). To compare with the WE-HALIC, this project aims to get minimum level energy efficiency certificate in compliance with the 2008 Energy Efficiency Law.

Figure 5.5. The construction site in Karayolları neighborhood.

The two urban renewal cases in the GOP district show that even though the Turkish government enabled and encouraged the energy efficiency and green-building appliances industry

to emerge, there is clear dissonance between sustainability visions outlined in official plans and actions carried out on the ground. The embodied urban coalition in the GOP district was dominated by powerful actors close to the government, who were able to distort the sustainable visioning towards economic gain at the expense of social and environmental benefits. This distortion, in turn, created cynism among locals towards the urban renewal process in the district. Within this power asymmetry and the socio-spatially segregated form of urban renewal process in the GOP, achieving socially inclusive sustainability is unlikely as it might come at the expense of social development and result in green gentrification.

The GOP urban renewal planning approach reveals that the sustainable neighborhood and green-building concepts with international green certificates such as LEED and BREAM become the symbol of prestige for residential projects, and make the understanding of "green" as something has to be purchased and privatized. The prestige of LEED-BREAM certificates already is replaced with opening up new green spaces or upgrading the existing green areas in the GOP district.

6. RESULTS

The analysis of the mobilized energy efficiency in Turkey and Istanbul shows that the nationwide energy-efficiency policy creates an impetus for the urban transition toward sustainability, especially in terms of upgrading the energy performance levels of the housing sector. Yet, this empirical study suggests that the centralized nature of the national policy-regulatory system makes it hard for local administrations to make any binding obligation related to energy efficiency in their municipal boundaries. Although the district municipalities engage with climate change and energy efficiency with the green building standards under the housing sector strategies, the tangible outcomes for generating more positive environmental and social effects are yet to come for Istanbul.

The collaborative force between the global networks and city is on-going, and it may lead the city into more sustainable trajectories, and eventually, more entrepreneurial, financial, political and social efforts to invest in energy efficiency. Yet, the lack of sustainability vision along with the economic growth aspirations in Turkey and the absence of successful low-carbon initiatives to feed confidence to the national and local economy might count as hindering factors, which disenabled the strong environmental and social effects in the city so far.

When it comes to the businesses environment and international financial institutions green credentials in Istanbul, we have yet to find evidence that energy efficiency is being mainstreamed either into the building sectors or among the individual customers in Istanbul. Even though there is a rapid business expansion of the energy efficiency related companies and entrepreneurship in Istanbul, the developers' lack of interests to use sustainable appliances in their residential projects hinder locals' awareness toward green goods for their built-environments. As the developers are the ultimate decision makers to use such products to higher energy efficiency level of a building, and the lack of binding legislation to upgrade energy efficiency level from C to B or A, the entrepreneurs cannot reach out to the individual costumers.

Meanwhile, the process of green gentrification in the GOP district emerged through asymmetries in the power and influence among various participants led to further distortions of the original sustainability planning and compromises sustainability objectives through densification, fragmentation, and exclusion. The finance capital invested in the GOP urban renewal project aimed to significantly densify new housing units that might have been benefited by the sustainability initiatives to create more urban green spaces. Yet, it remains an enormous challenge for profit-seeking capital to look beyond their own lucrative short-term returns and make the long-term investments needed to respond sustainability. Therefore, instead of implementing integrated urban planning, the parcel-based approaches are encouraging investors to develop only "profitable" parts of the district, which create in-and-out migration in the district, exclude others who reside on less valuable lands.

These short-term economic gains undermine essential communications between the local government and communities in GOP district to create a secure, long-term vision and strategy for the future of their urban environment. In this course of change, enriching quality of life by constructing high-level energy efficient buildings and privatized green areas for the prospect affluent residents raise inequality in the district.

The urban coalition in the GOP district failed to adequately address climate change mitigation issues by coherently ensuring energy efficiency and sustainability in all residential areas. Ultimately, the law no.6306 and the 2007 Energy Efficiency Law cannot play a critical role to reduce carbon emissions and create more sustainable living spaces for the new and renovated seismic-ready buildings. This could disenable an opportunity space for transformation to sustainability in the GOP's urban renewal process.

7. CONCLUSION

The explicit role of cities in sustainability transitions receives emerging attention in urban studies. Thereof, we have used the energy efficiency in buildings through green gentrification and policy mobility literature, for better understanding cities' roles in sustainability transitions. We argue that sustainability goals must be endorsed by both national and local policymakers, and supported by businesses and the society in order to be successful.

The urban landscape in Istanbul is changing through the seismic-risk driven urban renewal process since 2012. The GOP case shows that when the land is highly valuable in the cities, local governments easily compromise sustainability and green area concerns in order to gain more economic benefits –and only green if they ensure that it creates high market values. The district urban renewal project shows that even though there are not any actions to green or clean up toxic

sites, the district's sustainable vision and constructing green residential units with international building certification results in green gentrification and processes of socio-spatial segregation. In this case, inequality and lack of inclusive development is a major symptom of this "disease" that appears in Gaziosmanpaşa case and to be known as green gentrification.

This study has shown that the definition of green gentrification is not only limited to cleaning up formerly industrial/toxic areas and green these spaces to attract affluent. Green gentrification in GOP urban renewal project appears as designating green concepts (including green-roofs, trees, recreational facilities, parks, etc.) in the gated sustainable-residential units, which ultimately exclude people who cannot afford to live in such spaces. Thereof, in the long-term, green building and sustainable neighborhood concepts with international certifications might threaten or even be replaced with the public green spaces in the cities. The GOP case indicates that more research on green gentrification are needed to see how green-sustainable buildings are prioritized by the housing market in the process of urban planning, instead of creating green areas for public use.

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