LIVING WITH POLLUTION: UNDERSTANDING THE LIVES OF DILOVASI RESIDENTS

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ABSTRACT

LIVING WITH POLLUTION: UNDERSTANDING THE LIVES OF DILOVASI RESIDENTS

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This research investigates the emerging role of industrial growth in the context of Turkey and its environmental consequences for low-income groups. It examines the concepts from environmental justice studies to focus on how residents of Dilovası, known nationally as cancer valley, give meaning to their environmental problems and experience the potential health and environmental risks. This thesis hopes to contribute the literature from a Turkish case study.

Dilovası has a high concentration of factories near residential areas, which is a good example of a heavily contaminated community case in Turkey. Inhabitants of Dilovası, predominately low-income immigrants, face severe socio-economic and environmental problems due to excessive industrial growth in the region. Based on my interviews with the residents, most locals believe that these polluting factories would never have been built close to wealthier areas. Thereby, this thesis supports environmental justice claiming that the low-income groups bear the burden of environmental risk more than their affluent parts.

Keywords: Environmental Justice, Environmental Pollution, Health Risk, Turkey

ÖZ

KİRLİLİKLE YAŞAMAK: DİLOVASI SAKİNLERİNİN YAŞAMLARINI ANLAMAK

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Bu araştırma Türkiye bağlamında endüstriyel büyümenin etkisini ve düşük gelirli gruplar için çevresel sonuçlarını incelemektedir. Bu tezin amacı basında kanser ovası olarak bilinen Dilovası sakinlerinin çevre sorunlarını nasıl anlamlandırdıklarına ve potansiyel sağlık ve çevresel riskleri nasıl deneyimlediklerine odaklanmaktadır. Bu çalışmada çevresel adalet literatürünün kavramları incelenmektedir. Bu tezin amacı literatüre Türkiye'den bir vaka çalışmasıyla katkıda bulunmaktır.

Dilovası, yerleşim bölgelerinin yakınında kirletici seviyeleri yüksek olan fabrikalar olması sebebiyle "kirletilmiş toplum" tanımına uymaktadır. Ağırlıklı olarak düşük gelirli göçmenlerden oluşan Dilovası sakinleri, bölgedeki aşırı endüstriyel büyüme nedeniyle ciddi sosyo-ekonomik ve çevresel sorunlarla karşı karşıyadır. Yerel halkın birçoğu kirletici fabrikaların zengin bölgelerde inşa edilemeyeceğine inanmaktadırlar. Dolayısıyla bu tez, düşük gelirli grupların varlıklı kesimlere göre çevresel risk yükünü daha fazla taşıdığını öne süren çevresel adalet literatürünün temel argümanını desteklemektedir.

Anahtar Kelimeler: Çevre Adaleti, Çevre Kirliliği, Sağlık Riski, Türkiye

To my sister

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LIST OF ABBREVIATIONS

BIA	Bianet
EJ	Environmental Justice
EJOLT	Environmental Justice Organisations, Liabilities and Trade
EKOSDER	Dilovası Ecology and Health Association
DİLCEV	Dilovası Environment Association
GEBKIM	Gebkim-Kocaeli Gebze V (Chemical) Specialized Organized Industrial Zone
HEAL	Health and Environment Alliance
MARKA	East Marmara Development Agency
OIZ	Organized Industrial Zone
TBMM	The Grand National Assembly of Turkey
TEM	Trans European North South Motorways
TOKİ	Housing Development Administration of the Republic of Turkey

CHAPTER 1

INTRODUCTION

1.1 Purpose of the Study and Environmental Consequences in Dilovası

Dilovası, a poor neighborhood with a high concentration of heavy industries in the periphery of İstanbul, is where I chose to base my study on environmental justice. Although there are other areas in Turkey affected by heavy industry, Dilovası, known as 'cancer valley,' in the media, provides the best Turkish case study for environmental inequality literature. Dilovası is populated by low-income first and second-generation migrant families who came here in search of job prospects. The demographics of this place mirrors one of the central claims of the environmental justice movement. That is low income, and minority communities bear the risk of environmental and health problems more than wealthy individuals.

This thesis is about understanding the experience of pollution by residents of Dilovası. There are several important areas where this study makes an original contribution to the literature regarding environmental justice in Turkey. As a much-cited example of industrial pollution in Turkey, Dilovası had been in the foreground with its high cancer rates prior to the 2000s (Hamzaoğlu et al., 2011; Hamzaoğlu et al., 2014). In a short time, Dilovası has gotten local media attention and became very quickly named "cancer valley" (CNN, 2014: DW, 2019; Habertürk, 2013).

For instance, Karagöz's (2012) study reviews in detail the available information on 91 news articles that reported cancer cases in Dilovası, demonstrating evidence of the media's interest in the issue.Many published studies address several social, economic,

and environmental problems in Dilovası. While some studies focus on industrial development and its effects on the environment (Başaran, 2009; Bozkurt et al., 2015; Demir, 2015; Demirarslan and Demirarslan, 2018; Dinçer, 2007; Kılınç, 2017; Tezkızan, 2009; Tuncel, 2016; Sivaslıgil, 2007) others focused on air pollutans and transport induced air quality. (Arslantaş, 2019; Çetinyokuş, 2017; Yılmaz et al., 2020), ozone level (Özbay, 2012), heavy metal contamination and soil pollution (Çetin, Yurdakul & Odabaşı, 2019; Gögyıldız, 2019; Yaylalı-Abanuz, 2011; Yazılan, 2010), water pollution (Yolcubal, Gündüz & Sönmez, 2016), anthropogenic geomorphology (Uzun, 2020), human and economic geography (Cücü, 2013), volatile organic compound (VOC) pollution (Ergenekon et al., 2009; Pekey &Yılmaz, 2011; Tavşan, 2010), metal emission (Demiray et al.,2012), radioactivity levels (Doğan, 2019), the socio-spatial transformation of organized industrial zones (Kanbak, 2011), migration effects on education (Nar, 2008), migration and sense of community (Kolukırık, 2012) firms decision-making models (Boztoprak, 2011), city branding (Sedefoğlu, 2020), and health news impact on public (Karagöz, 2012). Indeed, each of the above studies highlights different areas regarding the many aspects of the Dilovası region. Those studies haven't covered the environmental justice literature contribution to understanding environmental contamination.

Nowadays, it is hard to determine whether we live in a toxicant-free environment or not (Liboiron et al., 2018; Larrea-Killinger et al., 2017). Toxicants' effects last for generations, and with their proliferation, they can be found on every scale (Boudia and Jas 2014). As Nading (2020) said, "There is no escaping the toxic world" (p.210). Nonetheless, it is unclear what remains in the body and how long it takes to experience disease symptoms. This turns into a more significant dilemma among the affected communities. All the above studies addressing pollution problems in Dilovası are consistent with the logic that the impact of toxicants can last for years, and it is not easy to point their sources.

However, what is certain is that socioeconomic factors play a significant role in toxicant exposure. Even if we accept that everyone to some degree is exposed to

pollutants one way or another, it is clear that people living close to polluting industries have the highest risk of being affected both socially, physically, mentally, and economically. Previous studies of environmental justice that have linked the consequences of toxic environment's effects on nearby communities might guide us on this issue.

Considering that toxicants are not easy to detect and have multiple sources, the industry does not always accept responsibility. Knowing that they won't be held accountable, industrial players continue to put profits over the environment, animal, and human health by using contaminants to increase productivity and production. The contamination history of Dilovası and the social, environmental, cultural and, economic consequences of living in toxic environments is what I aim to study in this thesis. The respective experiences of the residents of Dilovası are presented to put into the question of unequal exposure to environmental hazards through the thesis. By illustrating the inequalities, this study aims to make a valuable contribution to environmental sociology, focusing on the interaction between humans and the environment. This thesis tells the stories of Dilovası residents to illustrate how they define and give meaning to pollution, state, environment, and industry.

1.2 Environmental Contamination History in Dilovası

The purpose of this section is to review the literature on environmental contamination history in Dilovası. It begins with a brief introduction of the region's geographic importance. It gives clues to understand why this small town has been known for hazardous pollution problems for more than two decades. Dilovası district is in Kocaeli province and is one of the major industrial cities located in the Marmara region, close to İstanbul. Today, Kocaeli is Turkey's second-biggest industrial metropolis after Istanbul, accounting for approximately 15% of the Turkish manufacturing industry. Concomitantly, Kocaeli is home to seventy-nine of Turkey's largest 500 companies (Kosano, 2020). Among the 13 Organized Industrial Zones in Kocaeli, Dilovası hosts 5 Organized Industrial Zones and one industrial area. Although Dilovası is 118 km^2 in

size, the industrial zones and factories take up 40% of the total land area, and the residential areas account for only 25% (TBMM Dilovası Report, 2006). While Dilovası Organized Industrial Zone (OIZ) has 229 firms, Gebkim- Kocaeli Gebze V (Chemistry) Specialized OIZ hosts more than 30 firms, most of which are chemical and paint industries, and approximately 2600 people (Gebkim, 2022).

Today, Dilovası has a population of around 50 thousand people. The area has investment opportunities due to its location along the Izmit Bay coast and its proximity to transportation infrastructures such as railroads, ports, and the Osmangazi Bridge. The D100 highway and the TEM (Transit European Motorway) connecting Istanbul and Ankara pass through the region. The ports surrounding Dilovası make the area an attractive destination for industrialist developments (Kanbak, 2011; Tezkızan, 2009). Unsurprisingly, the small town of Dilovası has experienced unprecedented growth of industries over the past years due to its strategic location, cheap land, and tax cuts mainly provided to industrial investments (Dinçer, 2007). Along the same lines, facilities are generally drawn to the area due to market dynamics.

Pivotal to the industrial expansion from İstanbul to adjacent regions, Dilovası began to host factories in the 1960s. The first factories, such as İzocam and Marshall Paint, paved the way for other businesses to thrive in the region. A couple of years later, Olmuksan Paper, Solventaş Warehouse, Çolakoğlu Metallurgy, NASAŞ Aluminum Industry, Dyo Paint, Sedef Shipyard and other well-known factories began to operate in the area (MARKA, 2011a; Kanbak, 2011). As a result, both the number of firms and the population increased. The main industrial sectors are iron, steel, machinery, coal distribution, paint, storage facilities, and primarily the chemical and metal industry (TBMM Dilovası Report, 2006; Tezkızan, 2009).

In investigating Dilovası, Mehmet Dinçer (2007) contends that the era between 1960-1987 marks a period in Dilovası where the industrial settlement process begins before urban migration. It also meant that before the creation of the municipality in 1987, there was a lack of administrative control. This made it easier for factories to be built

without rigorous checks such as environmental regulations or health and safety checks for workers. According to Kanbak (2011), this period could be referred to as the first migration wave. The second wave of immigrants, between 1987 and 2002, transformed the region's economic, social, and political ties (Kanbak, 2011). Between 1987-2002 was an unplanned industrialization period since Dilovası Municipality used its legal authority to encourage firms that pollute the region in exchange for philanthropic activities such as school openings and infrastructure renovations (Dinçer, 2007). Accordingly, Dinçer summarizes the period as "the polluter pays principle is corrupted into a bribery-driven payer pollutes scheme" (2007, p.117). More specifically, industrialists were not penalized with fines and sanctions; instead, they strengthened their relations with municipalities to avoid fees (Dinçer, 2007). According to Dinçer, this shows us a long-standing abuse relationship (2007). As a result, Dilovası Organized Industrial Zone's creation in 2002 was an attempt to regulate the industry even though essential requirements to establish an organized zone were lacking (Dinçer, 2007: Kanbak 2011: Tezkızan, 2009). Therefore, Dilovası Organized Industrial Zone announcement can be considered a late attempt to control industrial activities. Although state officials envisioned that establishing the industrial zone would be a solution to Dilovası's problems, 20 years have passed, but problems remained.

As Dinçer (2007) study notes, The Law of Organized Industrial Zone in 2002, Metropolitan Municipality Law in 2004, and Environmental Law in 2006 have a significant impact on the environmental pollution in Dilovasi since it empowers the industrialist to disregard the regulations and the environmental problems. Similary, Kanbak (2011) demonstrates that industrialists in the region have a more concentrated power than the municipality itself, which she called "Industrial Municipality" (p.210). Hence, the conflict between the industrialist and the residents is widespread because many industrialists have argued that factories settled in Dilovası before the immigrants (MARKA, 2011a).

Since the 60s, most newcomers to the area lived in shantytowns- built overnight without permits. Many residential areas were built on forest lands and 2/B properties -land they are no longer considered as forests, but they still belong to the treasury. This causes further land registry problems today (Kanbak, 2011 & Kolukırık, 2012). Most crucially, the two neighborhoods, Fatih and Yeni Yıldız, as well as historical artifacts and rivers, remained within the OIZ boundaries (Marka, 2011a; Kanbak, 2011). As these two neighborhoods are very close to the industry, this makes the adverse health effects on the residents more observable. There are some reports and studies that advocate relocation. For instance, TBMM Dilovası Environment Research Commission Report (2006) highlights evacuating Fatih and Yeni Yıldız neighborhoods' residents to the mass housing area.

Furthermore, according to Demir (2015), all residential areas should be relocated to the Demirciler and Çerkeşli area, considerably far from industrial sites. On the other hand, another study anticipates that if the industrial districts move north, there is a likely high chance of avoiding most toxic waste releases, such as the distribution of PM10 and SO_2 concentrations (Tuncel, 2016). It can be interpreted that inadequacies of organized industrial zone laws, which allow residential areas to remain within the border of industrial facilities, can best be described as a wrong decision at first. However, I also agree with Onur Hamzaoğlu in considering that as long as the source of pollutants continues, relocation cannot be a permanent solution (TBMM, Dilovası Report, 2006).

In environmental justice literature, it is essential to know who bears the burden of pollution. The precise effect of race, low-income earners, and minorities is debated among environmental justice scholars to characterize contaminated communities. In a similar vein, several studies also account for the ethnic identity of Dilovası residents. During the initial industrialization phase, many immigrants from Southeastern Anatolia moved to Dilovası. Tezkızan (2009), Kanbak (2011) and Kolukırık (2012) indicate that the majority of the Dilovası people are migrated from Eastern, Southeastern Anatolia Region and the Black Sea Region in the early phase of industrial

expansion due to political concerns and work opportunities in the area. At the same time, those who migrated also provided cheap labor for those industrialists. To illustrate, Kanbak names Dilovası as “The East in the West” (2011, p. 120). Similarly, Kolukırık’s respondents prefer to name Dilovası as “small Ağrı” (2012, p. 141). This homogeneity, all in all, might be beneficial for collective action as discussed in environmental justice literature (Pastor et al., 2001).

1.2.1 Employment

Though most of the current population of Dilovası moved here to find employment, it is stated that most locals cannot find employment in the factories as they are not considered qualified by employers. For Kanbak (2011), the announcement of the Organized Industrial Zone is essential because her interviewers emphasized that it was easier to find jobs back then, but now employers prefer to hire skilled workers. These relationships may partly explain the share of the uneducated and primary school graduate population (MARKA, 2011b). As a result, this “exclusion of local labor” lead many to work in the construction business in nearby regions (Kanbak, 2011, p.241). Similary, Kolukırık (2012) draws attention to the same aspect while discussing the contradiction between the high amount of factories and unemployed people. Most crucially, as Kanbak’s (2011) interviewees also explain that their Kurdish identity negatively impacts their employment possibilities. Lastly, the fact that the government employees working in Dilovası do not reside in Dilovası is interesting but not surprising when considering all the negative environmental and health impacts attributed to Dilovası (MARKA, 2011a).

1.2.2 Health

Awareness of environmental contamination is not recent, having possibly first been noticed in the early 1990s. In 1994, as Dinçer (2007) emphasized, a cholera outbreak caused many people to suffer ill-health. Today, the hazardous pollution problems have dominated Dilovası for more than two decades. The proximity of the industrial facilities and the residential area led to suffering community members from many

illnesses such as chronic respiratory diseases and cancer. Since the work of the Kocaeli University Faculty of Medicine Department of Public Health, the environmental contamination research in the region has gained interest. The study investigated the causes of death in Dilovası in 2004 and found the presence of cancer death rate is about three times the average in Turkey. Because of the topic's significance, another study was conducted immediately at the beginning of 2005 (Terzi et al., 2013). According to the results of this research, 33 of 100 deaths were found to be caused by cancer in Dilovası. It also indicated that people who lived in Dilovası for more than ten years had a 4.4 higher chance of dying from cancer (Hamzaoğlu, Etiler, Yavuz & Çağlayan, 2011). Furthermore, a revealing article that compares both Dilovası (heavily industrialized city) and Kandıra (non-industrialized city) provides that particulate matter (PM_{10}) levels and heavy metals found in mothers and newborns are higher than the WHO limit values (Hamzaoğlu, Yavuz, Turker & Savli, 2014). Such publicity eventually led the Turkish Grand National Assembly to set up a TBMM Dilovası Environmental Research Commission to investigate the problems in 2006 (Terzi et al., 2013; Tezkızan, 2009).

While detaching health-related illnesses is a highly confusing topic, other studies continue to make industrial pollution and ill-health relationships visible (Altıntaş, 2020; Dökmeci, 2017; Right to Clean Air Platform, 2021; Türker et al., 2006; Turkish Medical Association, 2012; Yavuz, 2011; Yolal, 2014). For instance, Karaçayır (2009) informs that blood lead levels of children aged two to six living in Dilovası are above the limits. Nevertheless, many scientists' efforts aim to show the immediate and long-term health effects of industrial facilities and toxic hazards in Dilovası considered a threat to industrial development and economic growth (Turkish Medical Association, 2012). For instance, Onur Hamzaoğlu, a public health professor in the Faculty of Medicine of Kocaeli University, was sued when he shared the preliminary results of an ongoing research project about industrial pollution in Dilovası. He was accused of public indignation by disseminating false information on cancer (BIA, 2011; Kaan, 2011).

Similarly, Bülent Şık, a signatory of the Peace Declaration charged related to the publication of news articles about the Environmental Factors and Their Impacts on Health in Kocaeli, Antalya, Tekirdağ, Edirne, Kırklareli Provinces Project in Cumhuriyet Newspaper (Evrensel, 2020; Ilgaz, 2018). Like Onur Hamzaoğlu, he was accused of disseminating incomplete information about ongoing research and creating fear and panic in public. This might inform us of the failure of the state to take effective action to respond to those environmental contamination warnings; instead, the state seems to be concealing and discouraging information that is damaging the industry's progress.

1.2.3 Pollution

While there is an agreement on the harms of industrial production on health, there is no agreed explanation on what constitutes environmental pollution in Dilovası. As there is no adequate warning system to prevent those factories from discharging their waste into the Dil river, both groundwater and Dil river threaten the health of humans and non-humans (Yolcubal et al., 2016). Water pollution is one of the many environmental pollution problems in the region.

Most of the work carried out on the Dilovası lacks clarity regarding the causes of pollution. Organized Industrial Zones, small industries, coal processing sites, D-100 and TEM roads, fuel poverty, and the topographic structure of the Dilovası are all seen as contributors to the environmental degradation (Başaran, 2009: Dinçer, 2007: Ejolt, 2014: MARKA, 2011a: TBMM Dilovası Report, 2006: Tezkızan, 2009: Turkish Medical Association, 2012: Uzun, 2020). Many of the studies underline that the topographic structure of Dilovası, which is in a bowl shape, also influenced the pollution problems since the significant pollutants stay in the valley (Başaran, 2009; Demir, 2015; Tavşan, 2010; Tezkızan, 2009). According to the Turkish Medical Association Dilovası Report (2012), traffic density and unplanned urbanization also add to environmental damage. The existence of the newly built Osmangazi Bridge and the North Marmara highway that passes through the upper villages of Dilovası also

contributes to traffic density. Ultimately, the harmful impact of environmental pollution on human health and the environment seems to attract conflicting interpretations from various sources.

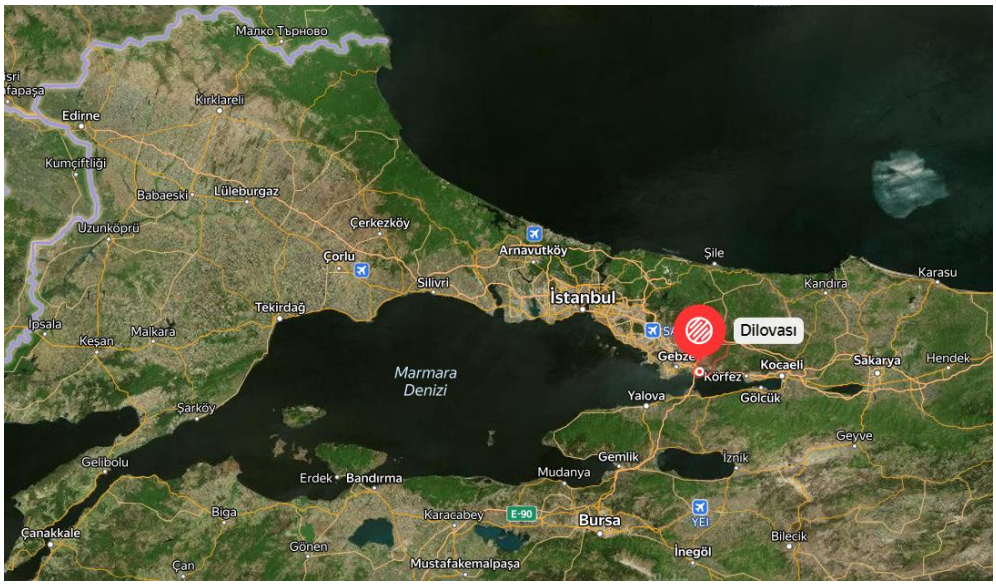

Figure 1. Dilovası, Yandex, 2021

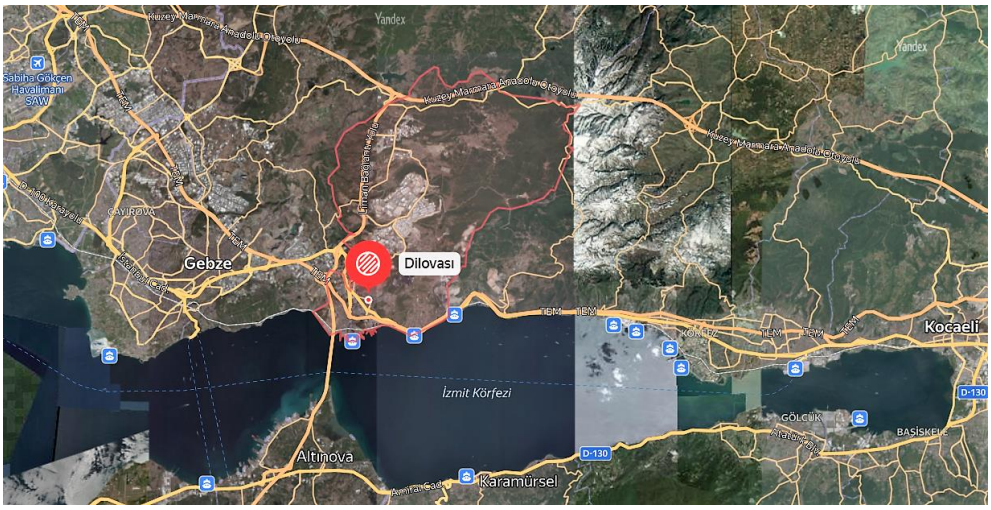

Figure 2. Map of Dilovası, Yandex 2021

Figure 3. Dilovası's map showing residential areas in the area,Yandex 2021

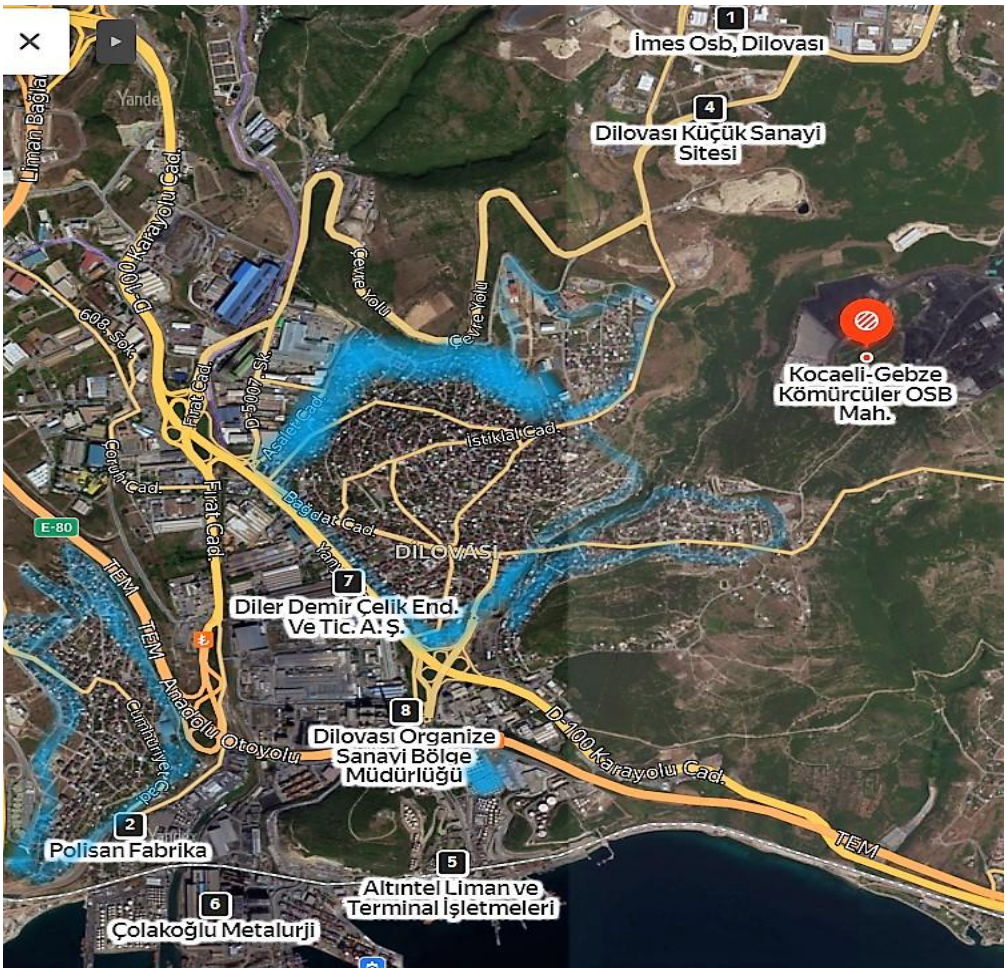

Figure 4. Residential areas marked with blue lines,

Yandex, 2021

1.3 Significance of the Thesis and Research Questions

So far, several studies conducted in the area and the published reports acknowledge the emerging role of environmental pollution and public health problems and make recommendations to avoid hazardous impacts in the future (MARKA, 2011a; MARKA, 2012; TBMM Dilovası Report, 2006: Turkish Medical Association, 2012).

For instance, in order to deliver specific solutions, a special organization under the governorship, including municipality members,OIZ managers, public administrations, academia, and non-governmental organizations, is recommended (MARKA, 2012). Nonetheless, it is suggested that air, water, and soil pollution maps should be prepared (ibid., 2012). Other reports such as the Marmara Development Agency's Report in Dilovası (2011b) focus on four main problem areas: environment and planning; administrative and infrastructure; economic and socio-cultural issues and provide a Dilovası Action Plan. Additionally, TBMM Dilovası Environment Research Commission Report identified 29 problems, responsible institutions, solutions, and time limits (2006). However, although the commission report underlined the dangers of new factory openings, new permits continue to be given to industrial investments (Turkish Medical Association, 2012). The report demonstrates that Dilovası residential area consisting primarily of squatter housing units, needs an urgent urban transformation project (TBMM Dilovası Report, 2006). Despite the large volume of well-planned reports and studies, it seems that there is a general lack of focus on solving the problem.

Today, more than a decade has passed without any precautions since the Turkish Grand National Assembly (TBMM) Commission suggested declaring Dilovası a "public health disaster zone" in 2007 (Şentek and Shaw, 2019). The solutions seem likely to fail in practice since severe environmental pollution is still a significant problem in Dilovası. Despite the continuing efforts to show the industrial encroachments' adverse effects on the environment and consistent pollution problems in Dilovası, the new factories continue to be built (Şentek and Shaw, 2019). For instance, eight new firms opened in Machinery Specialization Organized Industrial Zone (Şenol, 2020).

A group of journalists put greater efforts to ensure that the stories of Dilovası residents, as well as non-humans, were heard by the public (Armstrong, 2019; Şentek and Shaw, 2019). Their news reported that even if it is hard to reach the region's total official health records, many families, especially the children, had been diagnosed with

asthma, cancer, and leukemia (Calinescu, 2019; Şentek & Shaw, 2019). Their independent research attempts include collecting samples from rivers found later to be alarming toxicity levels (Şentek and Shaw, 2019). In addition to the roots of the problems primarily attributed to factories, the journalist team underlined the foreign investment dominance of countries like France, Germany, The Netherlands, Japan, and the US. Another significant aspect of their work is that the current mayor of Dilovası, Hamza Şayir, also owns a business whose partners are, indeed, polluting industries (Şentek and Shaw, 2019). This pinpoints a number of similarities to Dinçer's (2007) work, where significant collaboration has been found between industry and politics. Recently, on their trip to Dilovası, the Black Sea team reported a toxic hill in Dilovası that was used to cover asbestos waste for many years. What is crucial about their news article is that they revealed both the municipality and the firms had prior knowledge of the toxic hill for many years but chose not to act to clean the toxicity.

Furthermore, they found that the risk factors associated with the different types of asbestos are very high for human and non-human health in Dilovası (Shaw et al., 2019). Until now, the contamination continues to pose a risk. This prolonged contamination led several associations to be founded in the region. While Dilovası Ecology and Health Association (EKOSDER) was established in 2005, Dilovası Environment Association (DİLCEV) was founded in 2016, and Dilovası Life Association was founded in 2019 (Çeri, 2020; Degişenkocaeli, 2016; Turkish Medical Association, 2012). Although those associations have made much more effort to mitigate environmental problems, poor health continues to be experienced by the residents. Hence, the conflict between the industrialist and the residents does not seem to be resolved yet.

Almost all of the researchers that I have discussed so far in this chapter address unplanned industrialization and its harmful impact on nearby communities and failure of state to take action in the pursuit of economic growth. Although 15 years passed after the publication of TBMM's report, most of the environmental issues caused by industries have worsened with new industrial developments in the area. Even though

many researchers have extended our understanding of industrial facilities' impact on human health, the literature does not provide a lens into how residents of Dilovası understand the environmental issues and how communities engage with contaminated environments. Inclusively, the social, economic, and political roots of environmental issues are inevitable. Thereby, they must be researched. My aim in this thesis is to contribute to understanding the relationship between the environment and society. Thus, the study attempts to answer the following research questions:

1. How does local industrial pollution affect neighborhood living near polluted areas?
2. How does local experience shape the meaning of pollution, employment, industry, and environment?

1.4 Thesis Structure and Chapter Overview

Examining the environmental justice concept through Dilovası, this paper further moves to a review of literature on environmental justice studies that started in North America but spread quickly worldwide. To do so, the following parts are divided into several sections to examine. In chapter 2, based on the first environmental sociology scholars' work, I aim to show the earlier intention of establishing a new field of study by linking the environment and humans. After briefly looking at environmental sociology literature, the following section (2.1.1) discusses the claims of environmental justice for impacted communities, focusing mainly on Bullard et al.'s (2007) contribution by asking, "What groups are most affected? Why are they affected? Who did it? What can be done to remedy the problem?" These are also one of many questions addressed by this thesis. 2.1.1 section summarizes the main discussions of the environmental justice movement.

Reserving a brief introduction of the debate between race and income, and chicken or egg, in the 2.1.2 section, I aim to show this debate does not contribute to the environmental justice movement and for communities living in toxic environments. To show that my intention is not to contribute to this debate but rather to focus on how

lived experiences differ in different social, economic, and political concepts, in the following section, I address many qualitative studies efforts to provide the contaminated communities with needs and strategies. In the 2.1.3 section, I look to answer how degraded environments impact nearby communities. Based on several scholars' work, I aim to show that local's needs contrast when a community is stigmatized in many ways. Therefore, the 2.1.3 section seeks to identify detailed case studies from various parts of the world to show the potential power of those communities as well as the obstacles and benefits of living in contaminated areas. These cases help the reader to understand the complexity of environmental injustices and community responses. Although each community is diverse, there are also common aspects.

To explain commonalities among the environmental justice movement, the 2.2 section examines environmental justice movements in the USA. The following section, 2.2.1, focuses on outside the USA to acknowledge the importance of international environmental justice in changing definitions, approaches, and methodology. By empowering the environmental struggles in Turkey, the 2.2.2 section considers environmental justice studies in Turkey. What became apparent in environmental struggles from Turkey is that the state's emphasis on the link between industrial growth and economic growth is also observable in communities. I argue that the state's role as the promoter of economic growth does not contribute to the good of the environment and society in Turkey. Based on scholars' studies, I show that many local environmental struggles in Turkey are in danger due to the neoliberal economic policies. Nevertheless, local struggles deliver a strong message that they are not alone and not ready to sacrifice their environments.

Chapter 3 details my methodological approach and demonstrates how my methodology and field experience influenced my thesis. In the 3.1 section, I detailed how my field relations shape my study, leading to advantages and disadvantages. In the 3.2 section, I focus on how the researcher's role impacts the research. The

following section, 3.3, describes my writing process, and the last section, 3.4, presents a detailed account of my analysis process.

Chapter 4 is divided into five sections to examine Dilovası residents' experience with environmental problems. Section 4.1 explores what Dilovası for residents and how it is seen as a home. The following section, 4.2, shows how residents perceive pollution.

Section 4.3 is divided into two sub-sections. At the same time, the 4.3.1 section explores health problems and what it means for residents. The following subsection, 4.3.2, looks at the unequal relations between gender differences regarding experiencing pollution problems. The following 4.4 section looks at governing bodies' role in the prolonged pollution problems in the region caused by close relations between state and industry. In 4.5 section analyzes both benefits and harms of the industry to understand what job prospects mean for residents

Chapter 5 discusses the concept of toxic contradiction. This chapter of the thesis aims to answer how toxic contradiction is experienced in different manners by Dilovası residents. The following 5.1 section focused on the ambiguity of the sources of pollution. 5.2 section demonstrates that despite the harmful impact of industrial pollution, locals believe that new technological improvements will solve the pollution problems. Section 5.3 looks at how residents' lives are impacted by cancer valley news. This section demonstrates how being labeled a cancer valley negatively impacted its residents' lives in many ways. This section is divided into two subsections. In 5.3.1 subsection provides detailed accounts of residents who focus on the positive aspect of living in a contaminated community. This part focuses on how family relations and social networks impact individuals' lives and why they prefer to stay in Dilovası. Following subsection 5.3.2 focuses on stories of people who prefer to move farther away to avoid pollution. The following section, 5.4, looks at how complicated promises of relocation impact locals. The following 5.5 section argues that relocation is not a choice since industrial activities in the area have expanded in years. Section 5.6 focuses on the unemployment problem in the region. 5.7 section

discusses the difficulties of claiming environmental justice when industrial development is associated with economic development.

Chapter 6 summarizes earlier discussions and provides answers to the main research questions of this thesis. This chapter further recommends new study areas to focus on environmental contamination cases in Turkey.

CHAPTER 2

LITERATURE REVIEW

2.1 The Contribution of Environmental Sociology to Sociology

Before I begin to present a review of environmental justice literature, I will look at the earlier works identifying the importance of environment and society relations. While it is beyond the scope of this thesis to examine the dualistic approaches of environment and society, I will briefly present the environmental sociology discipline aimed at strengthening the link between society and the environment since the early 1970s. This brief introduction to the environmental sociology discipline will help show the growing and longstanding interest in exploring the link between the environment and society.

William R.Catton and Riley Dunlap's earlier works call for a new discipline, a new paradigm that is New Environmental Paradigm (NEP), focusing on the interaction between society and the environment. As they underline, this new paradigm is different from Human Exceptionalism Paradigm (HEP), which puts humans exempt from the environment as a separate category (Catton and Dunlap 1978; Dunlap and Catton 1979). Including one of the earlier sociologists' works, such as Emilie Durkheim's well-known words 'social facts can be explained only by other social facts' presented by these two prominent scholars as an example that classical sociology did not concern environmental issues (1979, p.244).

Although some have argued that earlier sociological works such as Emile Durkheim, Marx Weber, and Karl Marx are not ecologically blind (Jarvikoski, 1996; Hannigan, 2006; Rosa and Richter, 2008), Dunlap and Catton (1978, 1979) emphasized that the significant difference between an environmental sociologist and a classical sociologist is that environmental problems such as the depletion of natural resources and its relation to social order are neglected by the latter. Among the others, Karl Marx's engagement with soil depletion in his time and the rift between urban and rural production and consumption patterns seem most promising to argue that earlier works also concern the problem of ecological degradation (Foster, 1999). It is more accurate to note that Marx gave a new ecological insight by showing the degradation of soil under the capitalist relations that amplified within the separation between town and country. Nonetheless, the metabolic rift was the critical aspect played at both worker's and soil's depletion at the same time (ibid.). Foster's attempt to illustrate the environmental concern in society in Marx's early writings contrasts with Catton and Dunlap's thought that classic sociology neglected the interaction between society and the environment. According to Foster (1999), this dualism created by HEP-NEP definitions in the first place caused misunderstandings.

This significant role of the metabolic rift leading up to the controversial relationship between society and environment relations might have been recognized as one of the first attempts of sociology to underline the importance of the environment; however, the early works remained unnoticed for an extended period. This thesis also stresses the metabolic relations between towns and cities and their role in further injustices. Likewise, Dilovası is a significant example of a district populated by immigrants from the East. Many individuals experienced barren land in the East part of Turkey and moved to find work in work in the industries of western Turkey. My research is mainly concerned with how increases in production, industry, population, and pollution on one side of Turkey result in lower-income groups experiencing environmental degradation issues.

Significantly, these early attempts of a new discipline raised some new theories in the environmental sociology discipline that capture several essential features of environment and society relations. Consequently, the environmental sociology discipline has advanced by new approaches and resulted in the constitution of new works of literature. It is noteworthy to consider Scott and Johnson's (2016) article published on the 40th anniversary of the environmental sociology field, underlining that sociological aspects continue to outline a critical role for environmental sociology literature. Their paper focuses on the rise in environmental sociology research between 1970 to 2014 and argues that leading sociological concepts like inequality and stratification provide essential insight into the field. Similarly, Pellow and Behrm (2013) also note the power and inequality as the dominant feature of environmental sociology, which offers a valuable account of how broader unequal relations between humans, non-humans, and the environment have been shaped.

Recently, Bohr and Dunlap (2017) identified 25 key topics that environmental sociologists were working with. These topics are followed by further studies and interest areas over the decades, mainly seeking to identify inequality relations. For instance, whereas many studies by environmental sociologists have found interest in the "treadmill of production" (Schnaiberg, 1980; Gould, Pellow and Schnaiberg 2016; Schnaiberg et al., 2002), "risk society" (Beck, 1992), others found "ecological modernization" (Mol, 1995; Mol and Spaargaren 1993; Spaargaren and Mol, 1992) more explainable and revolutionary to study injustices related to the environment, society and non-human relations.

Though environmental modernization focused on a promising change provided by modern institutions to remedy the environmental deterioration problems as technological improvements and rationalization abled to do so, the treadmill of production paid more attention to the economic growth and new technologies' negative impact. Doing so focuses on the detrimental impact on both the environment and workers' well-being. Importantly, Schnaiberg's (1980) analysis shows that the rise

in production and profits had an enormous effect on the use of energy and chemicals that led to environmental deterioration.

Considering the intensity of industrial production since the 1950s and the individuals that settled near the factory to work, the potential negative impact of environmental pollution on nearby communities seems warranted. Therefore, different approaches taken by environmental sociologists, anthropologists, and medical researchers to describe the existence of environmental issues were later amplified by a series of other studies focusing mainly on the unequal distribution of environmental hazards on communities. To better understand, this thesis directs its attention to those studies that focus on environmental injustices. By doing so, I hope to offer a review of an important area of ideas and methods in environmental sociology, which continues to have a growing presence in the sociology discipline to link injustices with people and the environment. To understand and develop this thesis's main issue, the concern over the impacts of environmental pollution, I begin with the history of environmental justice literature. It has been thoroughly discussed in the following section through the lens of the inequality aspect.

2.1.1 The History of Environmental Justice Studies

In the last 30 years, scholars, activists, and organizations have published articles and books to emphasize environmental injustice practices worldwide. There is a large body of interdisciplinary literature documenting that deprived populations, such as the poor, the working class, and people of color, immigrants are most likely to bear the several consequences of environmental degradation apart from the affluent and white populations (Bullard, 1983, 1994; Bullard et al., 1997; Bryant and Mohai, 1992; Goldman and Fitton, 1994; Hurley, 1995; Mohai and Saha 2007; Pollock and Vittas 1995). Whereas environment has typically been conceived of as forests, nature, outside, EJ scholars define it more inclusively. To give an instance, in an interview, Bullard expressed: " the environment is everything: where we live, work, play, go to school, as well as the physical and natural world " (Schweizer, 1999). Patrich

Novotny's (2000) book called *"Where We Live, Work and Play: The Environmental Justice Movement and the Struggle for a New Environmentalism"* also clarifies how the environment is understood within the literature. Almost ten years later, we see that there is a new aspect of the environmental justice agenda, changing it to "where we live, work, play … and eat" (Gottlieb 2009). The environmental justice framework asked how environmental inequalities are created, reproduced, and challenged. To give voice to affected communities, it continues to find an answer to those questions: Who gets what and why? Furher Bullard et al. (2007) ask: "What groups are most affected? Why are they affected? Who did it? What can be done to remedy the problem? How can communities be justly compensated and reparations paid to individuals harmed by industry and government actions? How can the problem be prevented?" (pp.8-9).

Surely these questions guided a variety of other studies to point injustice distribution of environmental hazards among communities. My aim, in this thesis, is also to answer those questions aiming to approach the process that creates injustices. I aim to go back as much as possible to enlighten the historical process's role in creating environmental injustices. People's lived experiences with their surrounding environments will help me in doing so.

In a recent interview, David Pellow, a sociology professor at the University of California, Santa Barbara, continues to ask similar questions. But what is most important in this short video is how he explains environmental justice. He says, " Environmental justice is really a way of bringing the social back into what an environmental problem is."

Further, he continues: " You can't separate human beings from the environment. So, where we find communities that are marginalized by income, by race, by cultural factors, by religion, by citizenship status, by nationality, we tend to find, more often than not, that those same socially marginalized communities are facing a disproportionate burden of environmental harm… That social inequality, in the ways

in which we have distributed our environmental harm, is evident everywhere you go" (American Sociological Association 2020). Dilovası, a small town of Kocaeli, is one of the places where the people live with environmental burden in Turkey. This thesis, therefore, aims to expose this unequal relationship between the locals and the polluters.

Environmental justice has been framed in the US as a bottom-up movement from the beginning questioning the uneven distribution of environmental outcomes. Concomitantly, preventing the risk before they occur also shapes the very core idea of environmental justice studies. Central to the environmental justice movement is the mirroring concept of equality, distribution, fairness, justice, and sustainability. While the past decade has seen the rapid development of the environmental justice movement worldwide, it first began in the US, and then its approach was demonstrated in other nations. The beginning event of the movement considered the 1982 Warren Country protests to the PCB landfill, which is toxic waste in North Carolina, which was populated mainly by low-income and black people. It is mentioned that the importance of the Warren Country protest was its impact on the visibility of the movement and its leading role in the following period. One year later, the US General Accounting Office (1983) study, "Siting of Hazardous Waste Landfills and Their Correlation With Racial and Economic Status of Surrounding Communities," was published. In accordance, the study also found that in three of four cases, African American people consist of the majority to be affected by waste landfills (Brulle and Pellow 2006; Bullard, 1999; Mohai et al., 2009; Szasz and Meuser 1997).

Documenting the relation of race and environmental burdens was vitally crucial for the first two decades of the movement. The established association of race and toxicants in the late 1980s triggered other studies and reports. United Church of Christ's report (1987) is one of them and may have been the turning point in the movement's history.

In 1987, the United Church of Christ Commission for Racial Justice published the first national report, *Toxic Wastes and Race in the United States*, became a pioneer source, showing that racial and ethnic communities are exposed to hazardous waste more throughout the United States (United Church of Christ 1987). Here, race was pointed to as a significant factor in the distribution of toxic wastes; in other words, for treatment, storage, and disposal of hazardous wastes (TSDF). The strong connection between environmental injustices and elevated health risks requires the need for epidemiological studies and community participation in policymakers' actions (United Church of Christ 1987, p.x-xii).

Later, the First People of Colour Environmental Leadership Summit, which was held on October 24-27, 1991, in Washington DC, brought hundreds of people, organizations, and national leaders advocating to live in a healthy environment linking it to its connection to race, justice, and class. It is important to note that it was not the first event that brought many researchers from different places. For instance, in 1990, both Byrant and Mohai organized the Conference on Race and the Incidence of Environmental Hazards at the University of Michigan (Mohai 2008, p.24). Still, the 17 principles adopted in that summit undoubtedly played an essential role in the environmental justice movement. The conference and summit's high attendance are probably a result of joint problems regarding the environment and human rights. Here it is also important to emphasize that the civil rights movement's guidance had played an essential role in the early years of the movement (Bryant and Hockman 2005).

Equally crucial with other principles, the first principle argues the urge to reconnection and protection of both humans and other species for unity, saying that "Environmental Justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction" (Mohai, Pellow and Roberts 2009, p. 424). These founding principles included protection from all chemicals for all humans and other living creatures, equal participation in decision making, public policy based on mutual respect, environmental education both for present and future generations. David Pellow

(Pulido 2017), Schloesberg (2013), and Scholesberg & Collins (2014) have argued that the principles adopted at that time include ecological justice because it embraces the non-human species' rights, anti-capitalist view, gender, anti-militarism, etc.

These results further help form the US Environmental Protection Agency (EPA) Report on Environmental Equity: Reducing Risks for All Communities in 1992. It also agrees with the findings of other studies that concluded that racial groups, minorities, and low-income populations bear the higher risks of air pollution and waste facilities. An increase in the dialogue between affected communities and including them in the environmental policymaking process is further required to impact positively. The establishment of the Environmental Equity Office within the EPA can be regarded as a sign of accomplishment. Accordingly, interest among the politicians and scholars in the environmental justice movement arises significantly. Bullard et al. mark that the Environmental Justice Executive Order accepted in 1994 was a policy milestone since it orders all federal government agencies to consider their actions according to environmental justice principles (2007, p.38). However, the EPA's attempt to remove race and class from its Environmental Justice Strategic Plan might be evidence that there is still much work to be done regarding the acceptance of the movement's main arguments (Bullard et al., 2007; Sze and London 2008).

Undoubtedly, the help of a large body of work pointing to environmental inequalities from the late 1980s and the dramatic increase in EJ struggles worldwide brought a change in governmental policy level. However, David Pellow (2017) criticized the state-centered change aim since little progress has been achieved so far in policies. In 2017, in an interview, Pellow strongly criticized waiting for solutions from the state: "The government had informed communities of color that poisoning them is in the national interest! Do we really want to place our faith in the idea that the state can give us environmental justice?" (p. 52). In a similar vein, as Bullard and Johnson (2000) highlighted, the real power of environmental justice mostly succeeded through the contribution of the people behind the movement rather than the policy changes.

Twenty years after the release United Church of Christ Commission for Racial Justice report, Toxic Wastes and Race at Twenty report prepared for the United Church of Crist Justice and Witness Ministries published in March by Robert D. Bullard, Paul Mohai, Robin Saha, and Beverly Wright who are already pioneers of the field (2007). The authors again outline that the research outcome is very much the same as the earlier report. Race and socioeconomic factors still are the leading cause of the location of toxic wastes. However, race plays a more significant role in distributing hazardous waste facilities than twenty years ago. Undoubtedly race has long been a question of great interest in a wide range of fields, specifically in the US context. Yet, its relation to the environment has opened a new area of inquiry for environmental justice literature.

Therefore, it is clear to argue that the first discussions of environmental degradation were considered with its relatedness to race as it believed that race comprised the root of the problem. We continue to identify this link between race and environmental injustice, referring to other studies and reports. For instance, the works of Robert D. Bullard, who is considered to be the father of environmental justice literature, mainly focused on the relations between race and environmental injustices, which is rooted in deep institutionalized unequal enforcement. In his study, which is called Solid Waste Sites and Black Houston Community, he found that for more than 50 years, the waste disposal facilities in Houston were predominantly located near both black neighborhoods and black school areas (Bullard 1983). He stresses the role of institutionalized discrimination practices' in determining the decision of those solid waste areas. These practices, as he argued, always follow the path of least resistance and result in adverse health effects. Put it simply, black neighborhoods' locations were chosen on purpose since they were an easy target to become the dumping grounds of white populations. He argues that the foundation of those practices is rooted in discriminatory thinking (ibid.).

Overall, Bullard's pioneering works remain crucial to our broader understanding of environmental injustices. He is one of the first scholars who point to the

disproportionate siting practices in the southern United States populated mainly by black populations. In his book *Dumping in Dixie*, Bullard (1994) contends that industrial siting has a disproportionate burden of environmental health risks, especially for people of color, low-income groups, and less powerful. Concerning institutional racism's role in creating injustice, environmental racism is defined as a form of environmental injustice that refers to any practice that unequally affects black communities' life, health, and well-being (Bullard et al., 1997). One could consider his definition of environmental justice as an umbrella term in this respect. He defined the term environmental justice in the following manner: "environmental justice embraces the principle that all people and communities are entitled to equal protection of environmental and public health laws and regulations" (1996, p.493).

Indeed, the environmental justice framework is seen as a need because the US's current environmental protection apparatus legitimized the acts of polluting industries. A similar pattern is still valid in Turkey with the argument that industrial growth will enhance the economic well-being of individuals. Further, Bullard noted the importance of equal rights of contribution to the decision-making process of environmental laws and policies, equal protection and rights of all individuals to be free from the effects of polluters, and eliminating the threat beforehand (Bullard et al., 1997; Bullard 1999).

In line with, he argued that "environmental racism refers to any policy, practice or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups or communities based on race or color. Environmental racism is only one form of environmental discrimination. There are other forms of environmental discrimination" (Bullard 1996, p. 497).

On the other hand, David Pellow's article, which is called Environmental Inequality Formation, Toward a Theory of Environmental Injustice, (2000) notes that while environmental racism is more likely to point out the unequal impact of the environmental hazard on people of color, environmental justice is a broader term,

including both people of color and poor in the protection from environmental hazards. He further elaborates that environmental inequality, unlike environmental racism and environmental justice, focuses on disproportionate environmental problems affecting people (ibid.). Concomitantly, David Pellow defines environmental justice as: "The fair treatment of people with respect to the execution and application of environmental policies." Also, the second part of that definition is, "The full inclusion of all affected populations in decision-making around environmental policy so that no one is unfairly burdened from pollutions and hazards that emanate from our economic and industrial system" (Pulido 2017, p.46).

As can be acknowledged, different definitions result in inconsistency, and it is also criticized by Liam Downey underlining that the usage of multiple meanings might have prevented scientific progress (1998). However, the main argument continues to be pronounced as the inequality aspect in early works.

2.1.2 Two Important Debates: Race or Income & Chicken or Egg

Another essential point in early environmental justice movement studies is that it created a considerable debate whether race or income/class is a leading factor in hazardous facilities' location. For instance, Paul Mohai and Bunyan Byrant's (1992) study examines earlier studies that supported this debate. By following the same discourse, their analysis found that only in one study was race essential to the distribution of pollution, and in other studies, income played a significant role. However, when both were compared, race was more related to the distribution of hazardous facilities and proximity. Goldman and Fitton (1994) found race to be a more critical variable in a similar vein. However, as Szasz and Meuser (1997) pointed out, it is likely to reach different results as researchers study different units of analysis such as zip codes, census tracts, and distance-based methods. For instance, in the Ringquist (2005) study where he analyzed 49 environmental inequity studies using meta-analysis, he found that neither race nor income was explainable.

Nonetheless, Saha and Mohai's (2005) longitudinal study shows that race or income

did not play a role in the siting decisions in Michigan from 1950 to the 1970s. However, after the 1970s, the choice of locations supported the discriminatory acts through the US's sociopolitical changes. It is no surprise that this particular focus on race or class as a siting decision factor might cause one to choose only one aspect and deny the other. Other scholars criticized this approach, arguing that it does not offer any improvement to the current situation. For instance, Liam Downey's (1998) enlightening work says that "income and race should not be theorized as competing for explanatory variables. Posing them as such may simplify quantitative analyses of environmental hazard distribution. However, such an approach decontextualizes race and income by forcing researchers to abstract them from social, political, and historical processes involved in the formation of environmental hazard distributions" (p.767).

Further, he suggests qualitative historical case study analysis helps analyze the different aspects of the distribution of environmental hazards better (Downey, 1998). Similary, Brulle and Pellow's (2006) article that contains a detailed discussion of health outcomes and environmental inequalities underline that even though there is an advancement in methods used in the following years, " it has missed the larger picture" (p. 117). In other words, they believe that it covers other inequalities that may exist together. As a result, multiple and interconnected ways of injustices are likely to be missed. Most crucially, neither of these explanations did offer much to the affected communities.

Another significant debate was which came first, who asks whether the people or the industrial facilities came first. It is also known as the chicken-or-egg debate. For instance, Pastor et al.'s (2001) study, which covers thirty years of hazards, revealed that toxic facilities are being built in Los Angeles County communities rather than the minority move-in hypothesis. Moreover, Vicki Been and Francis Gupta's (1997) study examines the demographics of 544 communities near hazardous waste where Hispanic populated communities outnumber African Americans. While no change has been observed in the neighborhood's racial, ethnic composition, and income level

after the facility site, it is further argued that not the poor communities but the working class and middle-income neighborhoods hosted risky facilities (Been & Gupta, 1997).

Many scholars think rigid definitions are seen as constraints to capture the nuance to point the environmental justice framework adequately. For example, Pulido (1996) contends that the rigid dichotomies would not serve the literature's development since it fetishizes race as it denies the multiple, fragmented forms of race. She argued that not regarding race under the political, economic system, and the greater intersectionality between race, gender, class, and social aspects were unlikely to lead to poor outcomes in the end (Pulido 1996). In a similar vein, Bullard noted although race is still the potent factor for predicting where Locally Unwanted Land Uses (LULUs) are chosen, race and class are intertwined (Schweizer, 1999, see also Brulle and Pellow 2006).

However, the most crucial aspect in those large consistent early studies fails to answer the "how it happened" question (Szasz & Meuser, 1997, p.107). For Szasz and Meuser, seeking answers to this question might have enabled us to reach possible policies to lessen the current situation. Correspondingly, in an environmental justice review, Mohai, Pellow, and Roberts (2009) further ask " the essential sociological question about why such disparities exist so broadly" (p. 414). Like they mark this question itself helps to document why they happened in the first place. They listed three explanations: economic, sociopolitical, and racial explanations to reach answers. Since the above arguments briefly discussed racism, I will only focus on the first two. Before going into detail, it is essential to underline the author's comment that these three explanations are not exclusive and found to be intertwined.

The economic explanations mainly refer to the idea that industry/capital seeks its profit. Thereby, it looks for the cheap lands where the minorities and poor populations may also be highly populated. Since the industries are likely to choose affordable land, there might be no intent of discrimination (Mohai et al., 2009). Locating

potentially cheap lands and further result devaluation of land and releasing toxic substances, all in all, have a negative influence on adjacent populations. Over time, the neighborhood becomes poorer because the residents with better economic conditions prefer to leave the area with fewer environmental-associated problems. This also creates the case of property and market value decreases, further followed by the economic burden of those affected communities (Mohai et al., 2009).

On the other hand, sociopolitical explanations imply that both government and industry choose easy target communities that are primarily colored and poor. Pointing to the same aspect, Brulle and Pellow's (2006) article also contains a detailed discussion of the role of the market economy in the creation of environmental inequalities. Because those same communities are also weakly involved in opposition activities, firms target them purposefully (Mohai et al., 2009). These early discussions are meaningful because they provided a foundation for future research into how the attraction of business to the area shapes the community's future (Taylor, 2014). Nevertheless, Pastor, Sadd, and Hipp (2001) conducted a detailed discussion on which came first debate included social capital and communities' political power to explain the siting decision.

Building on others' work, Brulle and Pellow (2006) also criticize the environmental inequality literature for not paying enough attention to the sociological, ethnic, and history literature. They say each field's theories and research methods could have improved the environmental inequality perspective. Returning to the race discussion above, it is now clearer that the disciplines' intersectionality needs to draw a more comprehensive approach. Merging social justice and environmental movement into the environmental justice movement, how environmental inequalities created socially, politically, and economically has received considerable critical attention. For example, Pellow et al. (2002) bring awareness to the studies' incomplete feature since it focuses more on outcomes than how the inequalities have shaped through time. Rather than providing general information, even if it still is valuable for movement success, he says that emphasis should be given that environmental

inequalities are relationships that change under different circumstances. That is to say that the role of various stakeholders and conflicts in the communities the historical background of these conflicts, which remains unanswered in the earlier environmental justice studies, should be considered more detailly. So what might be the reason for those communities to live in toxic hazard environments? One probable explanation is economic. As Gould et al. (2004) point out, people affected by industrial pollution also severely needed the jobs industry provided. This economic dependence makes it harder for those populations to fight against polluting industries. Hence, it may be argued that the "economic blackmail" (Bullard, 1992), "treadmill process" (Bell and York 2010, p.115), "jobs versus the environment" debate (Matthews, 2010) shapes people's decisions to continue to live in contaminated communities.

Furthermore, Pellow et al. (2002) highlighted a need to embrace transnational capital's role in analyzing environmental inequality. Therefore, drawing on an extensive aspect in shaping the process of environmental disparities and capital, the authors point to process rather than a straightforward end, the part of stakeholders in shaping the inequality. As Ringquist says, "existence, extent, and sources of inequality" should be studied as well (Ringquist, 2005, p. 223). In the same manner, David Pellow (2000) underlines a need to look at environmental inequality as a sociohistorical process. Accordingly, he focuses on the role of multiple stakeholder relations in those processes and the relationship between production and consumption to reach a broader perspective to detect environmental disparities. Another point David Pellow noted is this passive and invisible representation of affected communities because "like all forms of stratification, environmental inequalities are relationships that are constituted through a process of continuous change that involves negotiation and often conflict among multiple stakeholders" (2000, p. 589).

Crucially, so far, we have acknowledged the early works of environmental justice literature. Nonetheless, many scholars' critical perspective to the EJ offers a new view that a sociohistorical perspective, longitudinal, qualitative approach within case

studies would better understand environmental inequalities. As we can see, there is a shift from quantitative analyses to qualitative and historical research analyses. Hence, more detailed information about the political and social context that creates environmental inequalities has been reached over time. It is clear from the literature discussed above that further research is required to understand complex relations and links that created the structures in which people live in a contaminated area.

2.1.3 The Impact of the Qualitative Approach

This chapter examines the studies that delved more into an in-depth understanding of affected communities and injustices to discover how residents responded to environmental hazards both in familiar ways and differently. This chapter extends and develops environmental justice claims that address well-known debates like chicken or egg, environment versus a job. As a result, this chapter hopes to contribute to an essential component of environmental justice literature: that is, affected communities are heterogonous.

Many scholars' efforts have helped position various types of contamination stories all around the globe. If we more closely look at, we can easily see cases of contaminated communities from Italy (Armiero and Fava 2016), Ukraine, Nigeria, Mexico, India (Adeola 2012), Bangladesh (Dewan 2020); Canada (Luginaah et al., 2010) Spain (Larrea-Killinger et al., 2016), Bosnia and Herzegovina (Broto, 2013), Greece (Skouloudis et al., 2017), Thailand (Sitthikriengkrai and Porath, 2017) and Sri Lanka (Senanayake, 2020). More contaminated community cases have recently been included from Latin America and South America (Carruthers, 2008; Castillo-Gallardo, 2016; DeCesare and Auyero, 2017; Auyero and Swistún, 2009a; Hernandez, 2019; Tironi and Rodrigues-Giralt, 2017). Doubtlessly, these are only a few examples; more studies are exploring the link between degraded environments and community relations. Nonetheless, increasing research worldwide proves that earlier scholars' emphasis on race and poverty debates is insufficient to explain environmental injustices (Carruthers, 2008).

Additionally, toxic life has attracted numerous local news, academic research, and reports in China (Lora-Wainwright, 2010, 2013; Mah and Wang, 2019; Liu, 2010; Van Rooij, 2010; Tilt, 2013). As Liu (2010) stated, with increases in intensifying cancer diseases in contaminated communities, families fall into extreme poverty as the expenses increase in the household. Furthermore, Alice Mah and Xinhong Wang's (2019) research contends that people living and working with petrochemical pollution experienced multiple "accumulated injuries of environmental injustice." Consistent with the definition, accumulated injuries include epistemic inequality, political resignation, socioeconomic burden, and environmental decline (2019, p 1962).

Whether we call "cancer villages" in rural China; "cancer alley" in Louisiana, or "chemical valley" in Canada (Allen 2003; Bagelman and Wiebe 2017; Lerner 2005; Lora-Wainwright 2010, 2017; Jackson 2010; Singer 2011), each calls our attention to the link between the environmental pollution problem and industrial development. Recently, Camelia Dewan (2020) conceptualized "toxic development" to illustrate briefly that the industry they make a living in is poisoning the people at the same time. In my opinion, this finding broadly continues to support the work of other studies in this area linking environmental pollution with economic growth such as "economic blackmail" (Bullard 1992), "treadmill process" (Bell and York 2010), "jobs versus the environment" debate (Matthews, 2010).

Concerning qualitative and ethnographic studies, despite the importance of quantitative methods in the early years of environmental justice studies, the role of environmental degradation in human experience has received increased attention across several disciplines in recent years. A considerable literature has grown up around the theme of psychosocial impacts associated with living with pollution (Barnes et al., 2002; Couch et al., 1997; Couch and Coles 2011; Edelstein 1988, 2004; Kroll-Smith and Couch, 1991) the coping strategies, risk perception and stigma (Bickerstaff, 2004; Bush et al., 2001; Broto et al., 2010; Garthwaite and Bambra 2018; Link and Phelan 2001; Luginaah et al., 2002; Slovic et al., 1994; Skouloudis et al., 2017; Zhuang et al., 2016) place attachment and identity (Burningham and Thrush

2003; Broto et al., 2010; Groves, 2015; Wulfhorst, 2000) public health and illness experience (Brulle and Pellow 2006; Brown et al., 2003). Further studies used combined approaches such as contested illness and risk perceptions, especially in the white community (Jacobson and Adam 2017), the intersection between environmental justice and reproductive justice (Hoover 2018). Since the early years, social science scholars, particularly environmental sociologists, have explored residents' experiences related to living in contested environments. In so doing, they showed us how related humans are to their environment and vice versa. For instance, Checker's (2005) study significantly focused on the contaminated Hyde Park neighborhood populated mainly by African Americans, producing interesting findings that account for the inseparable relations between environmental injustices' effect on educational opportunities, employment changes, mental health, and social life.

Most crucially, these early studies were later amplified by a series of different methodologies focusing on the go- along with interviews and the walking interview (Evans and Jones 2011; Carpiano, 2009), toxic autobiography and storytelling (Armiero and Fava 2016; Houston 2013), toxic portraits (Barnett 2015) toxic bios (Armiero et al., 2019) sensitive methodologies, bodies knowledge and toxic tours (Armiero and Rosa 2016; Fiske 2018; Pezzullo 2003; Wiebe, 2019), and collective memory (Adams et al., 2018).

In a study of the effects of toxic environments on communities, Micheal R.Edelstein (1998, 2004) coined the term "contaminated communities." As he underlines, "contaminated communities refer to any residential area located within or proximate to the identified boundaries for a known exposure to pollution" (2004, p. 22). His book, *Contaminated Communities Coping with Residential Toxic Exposure*, draws upon the stories of affected people to provide insight into how toxic exposures also lead to social and psychological effects such as stress, fear, stigma, and loss of community values. His study shows that living close to unhealthy environments and contamination has negatively impacted health, property value, community response, and future expectations. Further studies demonstrate how such experiences have been shaped

socially, economically, politically, and culturally. The critical findings from the preceding discussions indicate that race and class experiences intensify the community members' sufferings (Checker 2005; Cole and Foster 2001; Taylor 2014). The discussions also show that environmental concerns and toxic events are not easy to detach from as they are not touchable and observable by individuals (Edelstein 2004). As scholars clarify, however, these uncertainties can only be overcome through more research that gives sufficient consideration to the voices of affected communities.

According to Lerner (2010), those contaminated communities populated with low-income, and minorities also serve as sacrifice zones inseparable from race and class issues since they make more unequally health and economic sacrifices than wealthy Americans. What is significant about this definition is that pollution industries choose those sacrifice zones purposefully. Concomitantly, contaminated communities, used as a dumpsite for industries for many years, suffer political, social, health, and economic problems resulting in dangerous environmental conditions and social outcomes (Lerner, 2010).

A further important aspect of Lerner's (2010) research shows that ordinary people in sacrifice zones after long periods of contamination decided to deal with toxicity problems. Thereby, many residents eventually turned into environmental activists. His twelve case studies exemplify an empowerment process, many of whom are also inspired by earlier environmental justice cases. Undoubtedly, it is a story of how people, sometimes just one person, can educate themselves and the community about the pollution problem and fight for their health and well-being (Lerner 2010). Similarly, Julie Sze's study focuses on four neighborhoods in New York and shows residents' vital role in the history of environmental justice activism (2017).

The resident's experiences and understanding of toxic environments have guided the further studies in environmental justice, in turn, directly focused on producing toxic knowledge. Through the qualitative examination of communities, the process of understanding the difference between lay and expert knowledge about the

contamination is heightened. The most significant recent developments in this direction have been those of democratization of science aimed to make no substantial difference between lay and expert knowledge called popular epidemiology (Brown and Mikkelsen 1997), citizen science (Irwin 1995), street science (Corburn 2005), politicized collective illness identity (Brown 2007), exposure experience (Altman et al., 2008), undone science (Frickel et al., 2010; Allen et al., 2017) and knowledge justice (Allen 2018). They mainly demonstrate the critical relation between environmental health and social science. (Hoover et al., 2015).

The increased recognition of qualitivate method over the past several years has been associated with the prevalence of new concepts such as popular epidemiology termed by Phil Brown and Edwin J. Mikkelsen (Brown 2003). As several studies show, residents' investigation of toxicants and health problems originating from pollution proves that lay knowledge plays a crucial role in fighting against environmental contamination (Brown 1992, 1995; Brown and Mikkelsen 1997). It is sure that this definition cannot cover all contaminated communities' reactions but is instead a critical path to show that lay knowledge, not scientific knowledge engenders action. In view of this, Corburn (2005) extends the term and uses street science, the combination between street and professional expertise, which has emerged as a powerful tool in democratizing knowledge to improve communities' environment and health. While much is shared between popular epidemiology and street science, the latter differentiates since it is "a process that is not limited to epidemiological investigations or methods" (2005, p. 10). This difference may be because street science is more open to communities' research analysis and action structures.

The critical role of lay knowledge in the environmental justice movement provided new terms to the literature. Politicized illness experience is one them and used to define asthma experience for social action, political and economic outcomes (Brown et al., 2003). A fundamental common aspect of each, in my opinion, is the processes involving equal participation in decision-making, distribution, and participation (Schlosberg, 2007).

Although those studies were successful in gathering information about communities' resistances, some studies focused more on communities that do not react, ignore, or are doubtful about the sources of contamination (Auyero and Swistun 2007, 2008, 2009a; Bell and York 2010; Burningham and Thrush 2003, 2004; DeCesare and Auyero 2017; Greco, 2016; Hernandez 2019; Lora- Wainwright, 2013, 2017; Messer et al., 2019; Neumann 2016; Tilt 2013; Singer 2011; Shriver and Kennedy 2005; Jackson, 2010). The first detailed study of the toxic uncertainty in the affected communities was made by Javier Auyero and Debora Swistun (2009a). In the case of Argentina, a shantytown known as Flammable, it is stated that there is confusion among the state officials, doctors, and industries claims and the residents' own experiences of the pollution. This situation is called a "labor of confusion." Confusion created by powerful actors to protect industrial progress (Auyero and Swistun 2007). Although "Flammable is a story of people's confusion, mistakes and/or blindness regarding the toxicity that surrounds them" (2009a, p.4), this "experience of that polluted reality is, this book shows, social and politically produced; the meaning of contamination are the outcome of power relations between residents and outside actors (2009a, p.5). In a comprehensive review of Auyero and Swistun's work, Merrill Singer (2011) further identified "toxic frustration" where the people know who is responsible for their environmental suffering but do not hope to change or improve their lives (see also Mah and Wang 2019).

For many residents, people's hygiene and how they take care of their children increase the risk of exposure to chemicals. According to these residents, unresponsible families who let their children play near the factory sites are exposed more to harmful chemicals (Auyero and Swistun 2007; Shriver, Cable, and Kennedy 2008; Shriver and Kennedy 2005). Nonetheless, several studies illustrate that proximity to industrial facilities is associated with more exposure. This might imply that residents themselves also play a role in stigmatizing the ones living nearby (Atari, Luginaah, and Baxter 2011; Bush, Moffatt, and Dunn 2001). These studies aim to expand the environmental injustices within broader social and economic aspects.

Further studies into this area continue to provide additional evidence for why people prefer to stay. Hernandez's (2019) ethnographic fieldwork in Esmeraldas, Ecuador, is valuable to understand why people live in contaminated communities. He showed that the residents' long periods of displacement and the collective past shaped through the struggles to make their place liveable again resulted in a recognized need for a home, even in a polluted area. In a similar vein, how the La Oraya community in Peru does not act against lead contamination shows that meanings attributed to living in a toxic environment differ. This study shows us that what the residents call home may differ from the earlier studies emphasizing environmental activists' role in demanding relocation (Neumaan 2016). A critically important aspect of these studies is that socioecological links to environmental suffering in Latin America continue to be the best strategies for understanding unequal relationships (Castillo-Gallardo, 2016).

Additionally, in other ethnographic research in an industrial town in Eastern Serbia, Jovanović (2018) acknowledges that industry brought economic hope and environmental burden at the same time for people. Further research, such as Schlüter, Phillimore, and Moffat's study (2004), reveals that the change in the economic identity of a petrochemical town in Grangemouth, Scotland, hardship in finding employment has led to an increase in objection to environmental risks. The authors define it as a change in the "give and take" relation between town and industry (2004, p.720). As these studies show, due to the significant role of industries on economic stability and the future of the communities, individuals might stay faithful to the treadmill process (Bell and York 2010). The above studies produced results that corroborate the suggestion of a great deal of the previous work in Pellow (2000), where he argued the importance of the sociohistorical process to understand broader relations and meaning of polluted places for those living with them.

Drawing on an extensive range of sources, these authors set out the different ways in which community responses alter through social, political, and economic reasons. For instance, a significant study by Shriver and Kennedy (2005) found that an environmental hazard in Picher, Oklahoma, divides residents into two groups. This

meant two opposing cases; while one group supports relocation, the other does not want to move. In the same vein, Jerolmack and Walker (2017) call our attention to a white community that voluntarily welcomes an industry known as hazardous. Furthermore, a study on two contaminated communities in Blackwell, Oklahoma, and Canon, Colorado, showed that residents' psychosocial experiences differed (Messer et al., 2019; see Luginaah et al., 2010). These studies are in agreement with the earlier ones indicating that environmental injustice issues might be apparent to the outsiders, but the insider's understanding of reality could be different; therefore, it is likely for an insider to reject these descriptions (Burningham and Thrush 2003).

In another paper, Burningham and Thrush (2004) also argue that explanations such as polluted or poor might offend residents who see their living area as home. They express that description itself might be playing a role in stigmatizing the residents and their neighborhood. According to them, "addressing the connection between pollution and poverty in a way that makes sense to those most affected requires an approach which recognizes the inextricability of these issues from wider assessments of local life and tackles them within this context" (2004, p.230). What they point out is essential for this thesis which aims to examine the link between socio-economic inequality and pollution.

Even if I am aware of the possibility that descriptions themselves might be playing a vital role in stigmatizing the residents, I will name Dilovası as a contaminated community and a sacrifice zone. I think the devastating consequences of industrial growth and environmental degradation can not be better illustrated without considering those concepts. In this dissertation, the terms contaminated community and sacrifice zones are used interchangeably to primarily concern the impacts on nearby communities' hazardous environments (Lerner, 2005). By doing so, I aim to target nothing more precise than human and non-human lives. Yet, in the conclusion part of this thesis, I show that residents do not necessarily accept those terms to explain their living experiences.

Another term, slow violence, will be used in this thesis to refer to the toxicity situation in Dilovası, where the conditions of a toxic environment gradually worsen over time. What has happened in Dilovası, I think, cannot be described without resorting to the term of slow violence. *In Slow Violence and the Environmentalism of the Poor,* Robert Nixon (2011) defines it as:

> By slow violence, I mean a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all" (p.2).

According to Nixon (2011), the violence's invisibility and poverty amplify affected communities' vulnerabilities. However, the details of the definition of slow violence were not as easily acceptable for others. For instance, Thom Davies (2018) prefers "slow observations" for his center of attention to capture the complexities of slow changes in the environment. For Davies, environmental degradation is recognized by the people in time, and it is believed to be more helpful in identifying and characterizing pollution. For him, these slow observation cases may cultivate environmental justice for the individuals who continue to live with pollution. Moreover, as he underlines more toxic stories should be made available to delve into the "out of sight to whom?" question (Davies, 2019). For a similar purpose, Chole Ahmann (2018), on the other hand, focuses on how the time dimension of slow violence is manipulated and used as resistance and refusal by people.

Likewise, Dilovası is one of the oldest and most visible environmental degradation cases in Turkey. Over the past decades, the current situation, thus exacerbated by attempts to increase industrial facilities in the area. Without a doubt, as has been shown in the above part, there is no one way of studying or methods for understanding humans and their relations with degraded environments. The foregoing discussions led me to conclude that one of the most crucial parts of environmental injustice is making those stories heard in one way or another. Although recent efforts to expand community-based polluted areas face considerable contradiction among the communities' responses, each study has had a significant influence in the field of environmental

justice studies. As Davies and Mah (2020) define the toxic truths as "the heterogeneity of perspectives about pollution, which are rarely fixed, certain, or uncontested" (p.3), my view is also closely bound to the assumption that there is no way of explanation of pollution and environment. Yet, I am sure that "environmental injustice takes wherever social inequality and pollution collide" (Davies and Mah 2019, as cited in Davies 2019). The overall aim of this thesis is to contribute to environmental injustice literature with a case study from Turkey. I hope that this thesis helps to tackle more questions about Turkey's economic, societal, and political choices on human, non-human, and environmental relations (Boudia and Jas 2014; see also Sarathy, Hamilton, and Brodie 2018).

2.2 Globalization of Environmental Justice Studies

Having examined a detailed understanding of political, social, cultural, and economic analysis on the previous section, the following section will further focus on the globalization process of Environmental Justice. Since the environmental justice movement is dynamic and expanding its boundaries with new reports, articles, and grassroots organizations seeking justice, it is no surprise that the US's environmental justice has spread to other nations through time.

2.2.1 Environmental Justice Movement in Abroad

While the early environmental justice movement works in the US primarily examined the relations between race and distributional inequality, one of the most initial research in the UK was discussed by Friends of the Earth (Friends of the Earth, 2001). Their study found low income significantly impacted the links between deprivation, pollution, and health. Like US literature on environmental justice, the researchers claim that more impoverished communities are likely to be affected by factory pollution in England. In line with US scholars' arguments, they regard environmental problems as part of inequality, social exclusion, and deprivation, negatively impacting one's health and quality of life. It is essential to mention that since the UK race was not a dominant factor, unlike US history, the environmental justice literature

framework differed from earlier works. In that sense, as race was not a potent factor, we interpret similarities in support of Latin America and the Caribbean's environmental justice (Carruthers 2008).

Even though the environmental justice movement was first, both academically and politically, considered in the US, the environmental justice movement has spread to other countries very quickly. It might be possible that its concepts and definitions also developed within the new actors and political agendas. For instance, a research article called "*Searching for Environmental Justice: National Stories, Global Possibilities*" by Fritz (1999) discusses the new definitions of environmental justice used by international environmental justice organizations in Canada, Israel, the United States, and Africa. Also, he highlighted that several organizations, groups, and institutions that work on environmental justice communicate with each other through international meetings, seminars, and interest relations (ibid. p.184). Dialogs among communities are essential to raising the critical question of environmental injustice practices. These conversations might be considered tools to uncover the same patterns and even the same polluting industries that cause many communities to suffer simultaneously. Hence, a global perspective is essential to work for environmental justice.

Recently scholars have focused more and more on multiple injustices such as energy, military, climate change, and water injustices and the interconnectivity in international ways (Agyeman et al., 2016: Martinez et al., 2016). Inspired by the EJ, environmental justice networks have become practically visible across the nations. And the most critical success of the movement comes from local communities' struggles. Those communities are now much more easily connected and informed from their resistance and stories.

A related example of this might be the Environmental Justice Atlas. The Global Environmental Justice Atlas (EJatlas) is an online platform mapping socio-environmental conflicts worldwide (see: http://www.ejatlas.org). It appears as a

virtual online platform to understand the global picture and the greater complexity of environmental justice cases. Underlining that not all the cases are oppositions and protest's stories, there are also some successes of EJ stories to be inspired and lessons learned. The database provides a valuable source for the global environmental justice movement to find the similarities and, at the same time, the differences among the cases to reveal the power of community-based organizations and people. In parallel, the number of cases has been increasing significantly. In October 2015, there were 1600 cases (Martinez et al., 2016); this number had reached 2400 cases in 2018 (Temper et al., 2018). Today there are 3212 cases that have been reported so far. As an "incomplete inventory" (Martinez et al., 2016, p.735), the platform is likely to be considered a work of the process, helping to develop and extend the movement's power.

Respectively, The Environmental Justice Atlas Turkey has 59 cases, including Artvin Cerattepe and Genya Mina, Akkuyu Nuclear Power Plant, Gaziemir Lead Factory, and Ida Mountain Gold Mining. Each case shared information about project details, project area, type of population, affected populations, the start of the conflict and company information, and government actors involved (Ejolt Turkey). Most importantly, it helps to see the broader picture and the similarities in how those conflicts are created in various parts of the world. The main point is that even though most of them occur locally, there are all connected globally (Martinez et al., 2016). The chapter that follows will seek to address different environmental injustice cases from Turkey to link between environmental quality, local's struggle, and state position.

2.2.2 Environmental Justice Studies in Turkey

From South East of Turkey to the West, environmental justice activists and scholars are concerned about dramatic changes in the environment and attempts to connect the inseparable bond between humans, non-humans, and the environment. The Environmental Justice atlas shows 60 cases of environmental conflicts in Turkey.

These most salient environmental conflict areas are divided into more than eight topics: nuclear, climate justice and energy, water management, and nature protection conflicts (Ejolt EJ Atlas).

Most environmental degradation problems are caused by state actions that favor industrial and economic growth, especially after the 1980's neoliberalism move. Given the growth fetishism that characterizes the AKP government, which has ruled the country for more than 20 years, the environmental justice movement has gained support in recent years. Turkey's EJ movement was in large part a response to mining struggles, thermal power plants, coal-fired power plants, hydroelectric power plants, nuclear power plants, and mega projects' impact on both environment and communities' livelihood practices. (Aksu and Korkut, 2017; Özkaynak et al., 2015; Akbulut and Adaman, 2013). Many studies discuss how destructive these investments and projects can be if they ignore the well-being of nearby communities and the environment (Avcı, 2005). For instance, several studies draw attention to health risks and high respiratory diseases observed in communities living near thermal power plants (Akbay and Bilgiç, 2020; Pala et al., 2012; Karavuş et al., 2002; Menteşe et al. 2018, 2020). To draw attention to the environmental and health risk, many non-governmental organizations have long been warning about coal-based energy production's long-term impact on both the environment and the health of people (Heal, 2013; The Right to Clean Air Platform, 2021). Nevertheless, the unregulated polluting industries such as petrochemical, cement, and iron-steel smelting industries continue to negatively impact the health of adjacent districts (Çetin et al., 2003; Civan et al., 2015; Dökmeci, 2017; Erol et al. 2016).

In years, many local environmental struggles took more extensive public attention and inspired further environmental movements (Çoban, 2004; Özen, 2009; Uncu, 2012). Many studies agree on one thing: rural communities play a vital role in promoting awareness of the state's responsibility to safeguard the environment. Detailed examination of the Bergama movement by Hayriye Özen (2009) showed how locals protested against gold mining in one of the small villages in Turkey, expanded its

boundaries, and took many supporters both national and international channels. In another article Özen (2011) outlines a critical role for human relations with their environment and how two different cases in Turkey, while one is Uşak and the other is Artvin, point similar concerns regarding the gold mining industry. Those two communities protest mining activities since they believe that mining will adversely impact nature, health, and well-being. Futhermore, Çobanoğlu (2014) compares three different environmental justice movement cases from Turkey. While the first two, Bergama and Muğla, represent the gold mining activities in Western Turkey, the last case from Tunceli, an Eastern Turkey, focuses on energy policy's impact on environmental justice movements. Çobanoğlu (2014) underlines the increasing construction of dams and hydroelectric power plants in Turkey's eastern and black sea regions that threaten nature and human life, opening up a new field for environmental movements in Turkey concerning global energy policies. Investigating the distribution of energy infrastructures in Turkey, Aydın argues that some regions like Zonguldak were compelled to change an "ecological sacrifice zone" for the sake of enhancing economic growth (2019, p.1).

In addition, Erbil (2014) discusses how an environmental justice framework is necessary to understand the recent local environmental conflicts in Turkey. The Gezi Park resistance in 2013 emphasized the need for an urgent link between many environmental struggles in Turkey and the fundamental transformation in the broader political and economic system to achieve environmental justice (Özkaynak et al., 2015). Similar to the environmental justice literature to show that environmental problems are not inseparable from social, political, and economic issues, the environmental movement in Turkey presents those interconnections to pursue a just environmental movement understanding (Paker,2020). However, accomplishing environmental justice objectives is not an easy task in Turkey, where state legitimacy is attached to its promises of economic development and industrial growth (Akbulut 2019; Akbulut and Adaman, 2013). Adaman, Arsel, and Akbulut (2019) stated that the Soma mining catastrophe that killed 301 miners resulted from Turkey's concentration on economic development over human life and environmental preservation.

Likewise, Avcı's (2017) study showed that although locals in Ida Mountain recognize mining's adverse impact on their lives, they continue to support Turkey's economic interests and growth through such activities. Thereby, the locals in Ida Mountain think unfertile lands, not their land, should be used for mining industry activities. In that sense, they are not against mining activities as long as it is not in their region; thus, they follow the state's economic growth discourse (Avcı, 2017). Similary, Eryılmaz and Akman (2016) highlighted that in Artvin, where an anti-mining activity lasted more than 20 years, some people believe that new technologies and proper inspection might lessen the detrimental impact of mining on the environment. For those people who say that new technologies are a must for mining activities, mining is also necessary for the economic development of Turkey.

For Özen (2018), the lack of politicization of local environmental struggles in Turkey lessens the possibilities for broader social, political, and economic change. To interpret how local communities will be experiencing mining activities or thermal power plants is a rather ill-defined attempt. All in all, every community is heterogeneous. For instance, Arsel, Akbulut, and Adaman's (2015) study discuss how local's historical political experiences in the late 1980s influenced the formation of the environmental movement in Gerze against the construction of a thermal power plant. For them, Gerze's leftist position further influenced its locals to interpret the thermal power plant project as a means to fight against the state's neoliberal goals (2015).

Moreover, a recent study by Ocak (2018) involved how unregulated environmental policy procedures result in the degradation of the Ergene river. For Ocak (2018), the powerful position of industry and the excessive industrialization due to lack of state and government control resulted in an increase in pollution of the river. In other words, as Ocak (2018) states, in the name of economic prosperity, the state turn a blind eye to polluting industries.

Although the number of studies on environmental struggles takes into account the impact of the state's growth ambition on the environment and the role of

environmental struggles in understanding the social, political, and economic consequences, our understanding of how communities themselves give meaning to environmental degradation in Turkey remains limited. In that regard, this thesis aims to show how Dilovası residents' experiences of environmental pollution reflect the broader inequalities.

CHAPTER 3

METHODOLOGY

By aiming to unpack how people construct meaning toward their polluted surroundings, this thesis also accepts qualitative research to examine the individual's relation with their environment. It is widely accepted that every research needs a problem to start with. Researchers chosen research problem or "need for the study" like Creswell (2007, p.102) points in a more appropriate wording, follow the researcher until the day she submits her thesis. Surely even afterwards.

Further, Creswell defines qualitative research as "begins with assumptions, a worldview, the possible use of a theoretical lens, and the study of research problems inquiring into the meaning individuals or groups ascribe to a social or human problem" (2007, p.37). He adds that participants' unique voices, both researcher and participants' background and the interpretation by the researcher, affect how one makes sense of qualitative research (Creswell, 2007). Undoubtedly, the final reader of the written text also involves that process. Yet, there is a possibility of critically engaging during this inquiry process to take action to change it.

My inquiry about pollution and industry is probably pursued according to my life experiences. I was always involved in ecological projects since high school. As a sociologist, I also understood early on that broader socio-economic relations need to be critically evaluated to study environmental and social concerns.

When I was first introduced to environmental justice literature in an environmental sociology course, I realized how this topic, the contamination of communities and people's interpretation of living with pollution, was missing in the sociology literature in Turkey.

My research problem mainly tackles the impact of industrial pollution in a small city in Turkey, Dilovası. To study environmental degradation's impact on nearby communities, I choose Dilovası, a case study to unravel this link. Therefore, this thesis intended to understand Dilovası residents' interpretation of living in a cancer valley and the meaning they attribute to pollution, state, and industry's role in their daily lives. My thesis can be considered an early attempt to understand the pollution problem from the perspectives of the Dilovası residents. For that reason, it might be taken as a good starting point to get close to the lived experiences of people living close to industrial activities. To do fieldwork, I stayed in Darıca, another town in Kocaeli, an hour away from Dilovası. There I spent two months and commuted to Dilovası daily to carry out my research.

By conducting face-to-face in-depth interviews, I aim to reveal: the lived experiences of residents with their environment. In sum, I lead in-depth semi-structured interviews with 45 people. Interviews were done face-to-face in public areas, such as coffee houses and parks, by keeping physical distance. I often sat with groups of women gathering in their gardens and joined men's conversations in tea houses. Besides in-depth interviews, field diary, participant observations, focus group discussion, I also spent considerable time taking photos of Dilovası. These photographs were beneficial to understand the landscape of Dilovası, which plays a crucial role in the pollution issue. As Dilovası is in a bowl shape, the distribution of industrial activities in the settlement areas is very uncommon. Therefore, the visual material was one of the most important sources of my data.

In my questionnaire, I focused on eight topics. My topics were neighborhood, industry, environment and pollution, health, daily life, socio-economic aspect, relations with administrative authorities, and change and future.

Each interview proximately took 40 minutes to one hour. I used a purposeful sampling strategy since I needed to learn how the experiences and meaning of industrial pollution change based on different neighborhood locations. Before the field, I planned to visit two neighborhoods to see whether pollution differs in each. Purposive sampling has a vital role in my methodology, but most importantly, my sampling decisions have changed during the research. During the fieldwork, I realized that they were pointing to other neighborhoods where pollution problems might be most concrete rather than their living areas. Then, I shift my focus on how the experiences of people and the meaning attributed to industrial pollution change according to each neighborhood. As a result, I conducted interviews at nine different neighborhoods in Dilovası.

Thereby, I conducted my research with 45 individuals from nine neighborhoods. I informed every participant in advance about the details of the interview process and the study's aim. When necessary, I shared my research questions beforehand to give them an idea of the research. Further, I told them that I would use the information on my research anonymously. I also informed the participants that they had the right to withdraw at any time and stop the recording. When a recording was not allowed, I took notes after the interview. I took those notes after each interview not to miss any informal, nonverbal information.

Nonetheless, I kept a field diary. I changed the respondents' names to conceal their identities. I also got the verbal approval of the person whose face is visible in this thesis. During the writing process, I ensured my participant's anonymity and confidentiality since this thesis focuses on a small region where everyone can easily recognize each other from clues. In general, I pay close attention to Ruana's principles

to conduct ethical research, not violate my interviewee's rights and cause any damages (2005).

I used a snowball sample based on my key informant's social networks. After I met and interviewed the gatekeeper, I asked if they knew any other person willing to participate. Also, I recruited participants informally, primarily by introducing myself and the research aim. Therefore, I talked with 25 women and 20 men in total. Additionally, while I was doing interviews in public spaces, many other people also wanted to join. Hence my in-depth interviewees sometimes turned to focus group interviews. Mainly, focus group interviews often played a crucial role in developing my data since I had the chance to see different possible contradictory views about the same issue. I learned from the two focus group discussions that many are unsure about the future of Dilovası. While some participants assumed that the coal processing site would undoubtedly be relocated, others argued that it would stay as it is because industries are more powerful than the state who supposed to protect citizens' right to live in a better environment.

Furthermore, some speculated that the entire Dilovası community would be relocated. In contrast, others believed that only two neighborhoods closest to the TEM highway would be relocated. For me, these are precious discussions for me to see how a contamination case from Dilovası supports the study of Auyero and Swistun (2009a), which points to toxic uncertainty in the case of Flammable, Argentina.

Like Yin (2009) pointed case study offers different views of individuals to the same context. This is observable in many aspects of my research as well. For instance, when I asked: "What do you think about Dilovası cancer plain news?". The answers are then divided into two opposing parts: ones who believe that Dilovası has a higher percentage of cancer rate concerning the statistics of Turkey. By contrast, the others described that that news is an attempt to chase the inhabitants of Dilovası through panic and fear.

Table 1 Demographic profile of participants

	Nickname	**Sex**	**Age**	**Birthplace**	**Moved to Dilovası in**
1	Cansu	F	25	İzmit	-
2	Ayşe	F	29	Dilovası	-
3	Sevil	F	40	Iğdır	2004
4	Halime	F	31	Dilovası	-
5	Aysu	F	50	Giresun	1976
6	Zehra	F	50	Diyarbakır	2005
7	Aydan	F	45	Bayburt	1986
8	İzzet	M	32	Dilovası	-
9	Faruk	M	60	Ağrı	1986
10	Ahmet	M	53	Giresun	1990s
11	Halil	M	40	Dilovası	-
12	Ragıp	M	37	Erzurum	1974
13	Ali	M	68	Trabzon	1983
14	Mehmet	M	50	Afyon	1985
15	Necati	M	76	Malatya	1968
16	Haydar	M	39	Bitlis	1990
17	Hakan	M	57	Ağrı	1984
18	Erdal	M	35	Ağrı	1992
19	Mehtap	F	48	Dilovası	-
20	Hamza	M	47	Ağrı	1989
21	Merve	F	34	Muş	2000s
22	Belgin	F	29	Dilovası	-
23	Esin	F	33	Muş	1996
24	Sevgi	F	48	Giresun	1993
25	Hülya	F	33	Dilovası	-
26	Seda	F	58	Trabzon	1986
27	Güler	F	38	Erzurum	1990s
28	Hatice	F	43	Van	1995
29	Sevcan	F	64	Trabzon	1987
30	Sunay	F	46	Dilovası	-
31	Derya	F	62	Ardahan	1984
32	Esra	F	53	Muş	1990s
33	Feyza	F	50	Ağrı	2019
34	Aygün	F	32	Şirvan	2016
35	Enver	M	42	Bingöl	1992
36	Celal	M	41	Trabzon	1973
37	Fatih	M	49	Gümüşhane	1989
38	Burak	M	33	Ağrı	-
39	Hikmet	M	36	Düzce	1974
40	Hakkı	M	45	Ağrı	1991
41	Emrah	M	46	Ağrı	1980s
42	Candan	F	43	Balıkesir	1994
43	Ömer	M	24	Dilovası	-
44	Duygu	F	41	-	-
45	Okan	M	57	Dilovası	-

Table 2 Neighborhood and employment profile of participants

	Nickname	**Neighborhood**	**Education**	**Work status**
1	Cansu	Tavşancıl	University Degree	Self-employed
2	Ayşe	Diliskelesi	High School	Invisible homemaker
3	Sevil	Diliskelesi	Primary School	Invisible homemaker
4	Halime	Kayapınar	High School	Invisible homemaker
5	Aysu	Fatih	Primary School	Invisible homemaker
6	Zehra	Mimar Sinan	Primary School	Self-employed
7	Aydan	Mimar Sinan	High School	Self-employed
8	İzzet	Köseler	High School	Private sector employee
9	Faruk	Diliskelesi	High School	Self-employed
10	Ahmet	Mimar Sinan	University Degree	Private sector employee
11	Halil	Cumhuriyet	High School	Government official
12	Ragıp	Tavşancıl	High School	Self- employed
13	Ali	Mimar Sinan	High School	Retired
14	Mehmet	Diliskelesi	High School	Self-employed
15	Necati	Fatih	-	Retired
16	Haydar	Orhangazi	University Degree	Self-employed
17	Hakan	Fatih	High School	Self-employed
18	Erdal	Diliskelesi	Primary School	Factory worker
19	Mehtap	Kayapınar	High School	Retired
20	Hamza	Orhangazi	Primary School	Self- employed
21	Merve	Cumhuriyet	High School	Factory worker
22	Belgin	Cumhuriyet	High School	Invisible homemaker
23	Esin	Mimar Sinan	High School	Unemployed
24	Sevgi	Fatih	-	Invisible homemaker
25	Hülya	Çerkeşli	-	Unemployed
26	Seda	Cumhuriyet	Primary School	Invisible homemaker
27	Güler	Orhangazi	Primary School	Invisible homemaker
28	Hatice	Orhangazi	High School	Self-employed
29	Sevcan	Turgut Özal	Primary School	Invisible homemaker
30	Sunay	Çerkeşli	Primary School	Invisible homemaker
31	Derya	Orhangazi	Primary School	Invisible homemaker
32	Esra	Turgut Özal	High School	Invisible homemaker

Table 2 (continued)

	Nickname	**Neighborhood**	**Education**	**Work status**
33	Feyza	Turgut Özal	Primary School	Invisible homemaker
34	Aygün	Kayapınar	High School	Factory worker
35	Enver	Turgut Özal	Primary School	Factory worker
36	Celal	Cumhuriyet	High School	Self-employed
37	Fatih	Cumhuriyet	High School	Government official
38	Burak	Gebze	High School	Factory worker
39	Hikmet	Tavşancıl	High School	Self-employed
40	Hakkı	Turgut Özal	High School	Factory worker
41	Emrah	Kayapınar	High School	Factory worker
42	Candan	Tavşancıl	University Degree	Self-employed
43	Ömer	Diliskelesi	University Degree	Unemployed
44	Duygu	Gebze	High School	Factory worker
45	Okan	Köseler	High School	Government official

3.1 Field relations and limitations

A significant problem with qualitative research is whether you have access to the people you planned to conduct interviews with or not. Luckily, before going on the field, I did an online interview with Prof. Dr. Onur Hamzaoğlu and journalists Doğu Eroğlu and Zeynep Şentek, who already have connections with the local people. It was a fortunate opportunity to listen to their prior research experiences as their knowledge about the area expanded my familiarity with the local community before even going there. I am also grateful to each one of them for guiding me. Such as telling me about different pollution problems that each neighborhood faces and recommending recent research that Prof. Dr. Onur Hamzaoğlu wrote about considering the industrial encroachment and pollution problems Kocaeli, not only in Dilovası. Through their comments, I shaped my focus and scope during the fieldwork.

Furthermore, I asked my participants about their suggestions on my research questions. I mostly found myself editing and shortening my questions since most of them found too much to answer. There were several questions that they honestly shared that they did not understand or were not easy to talk about. Many advised me not to ask so many

detailed questions. Instead, they suggested changing them with general topics like industry, environment, and employment. I paid close attention to the feedback and modified my questionnaire based on my field experiences. Yet, I was happy that my questions regarding their land registration status surprised them. They emphasized that it was insider information, and they would not expect someone not from Dilovası to know it. In light of their feedback, I advanced my questions and tried to follow what they were more willing to share with me. During the field, I felt the need to emphasize that I am not a journalist but rather a graduate student interested in the story of Dilovası residents.

My educational background and gender gave me some privileges that I cannot admit. However, at the same time, I had heard many times how it should be difficult for a woman at my age to come here and talk to strangers. Many times, I was asked how I was sure about my security. For instance, I was warned that I should not go to the Yıldız neighborhood because there was no public transportation, and it wouldn't be safe to use a taxi.

Hearing comments about my safety and the fear that "something bad will happen" undoubtedly affected my psychological well-being in the field research. I felt that they were right, and I was not supposed to wander freely. I would say that my decision to continue to do more in-depth semi-structured interviews with women and avoid interviewing men is the result of my experiences in the field. In the end, I am glad that I have done more interviews with more women than men, and my data include women's perspectives vividly through that choice. Along with it, I felt sorry that I found myself not collecting information because of the pathrical order.

Nonetheless, where I stayed in Darıca was next to a small organized industrial site. I found it a bizarre coincidence, but all in all, it helped me to gain at least some experience living next to industrial pollution. Similar to my respondent's experiences, I was also wiping the floor every day to get rid of dust. Nonetheless, the noises were causing me to wake up so early. I was never truly sure where precisely, which firm

was responsible for that noise, considering there were thousands of small firms. In this sense, my observations match with the residents of Dilovası, who are uncertain about the sources of pollution problems. Obviously, my two months' stay in Darıca did not make me an "insider." (Dwyer and Buckle, 2009). However, it helped me engage in the research topic and discuss some of the similar experiences with my participants.

Some of my research participants did not agree to have their answers tape-recorded. Most female participants didn't want to be tape-recorded and often underlined that they had no detailed information about the industry. Women's uncertainty and timidity are also reflected in their body language. As a crude example, I remember one woman who was self-questioning herself for not being able to recall any detailed information. For instance, she couldn't remember which factories came before they settled or which ones were built after they moved to Dilovası. I always explained how women's experiences and knowledge were necessary and valuable for my research. After this explanation and my attempts to comfort her that there is no wrong or correct answer, but only to your own particular experiences, she agreed to continue. On the other hand, the male participants were mostly self-confident and talkative.

3.2 Researcher's Role

As the researcher in this study, I knew I had to be impartial and respect the local's privacy. Sometimes I had multiple interviews with the same person as those are the ones that I had met primarily at their shop or restaurants. Most of the time, they would wonder about the other residents' answers or my ideas about the industries in Dilovası. The researcher's different roles are best illustrated by Silverman (2001). My role fits with what Silverman defines as a partisan role because not explicitly but rarely I shared with some people that I do not support industrial growth in Dilovası since it is already packed with many environmental pollution problems.

As Flick (2007) underlines, qualitative research helps interviewees reconsider what happens around them during the researcher's intention to learn about her life. My

attempt to find out how residents give meaning to their environments and their relations to industrial pollution may also impact residents to look at their lives from another perspective. Qualitative research, in its nature, is a dynamic interpretation process where both researchers and the participants interpret and try to understand each other.

As C. Wright Mills pointed out in The Sociological Imagination (1959), the key contribution of sociology to the world is to show how personal troubles connect with social issues. Environmental issues turned into a public health problem when mucilage was discovered in the Marmara Sea beginning of June 2021. It was also the same time that I went to the field. As expected, my participants and I talked over the issue and asked ourselves whether we could swim or eat fish this summer.

I use the phenomenological approach because my research addresses the experiences of living with industry. It is a suitable option to understand how pollution affects their lives, their motivation to live there, and what they think about the industry in general. Although many of my participants share common experiences, I believe many more different stories are waiting to be heard. Among my participants, I found that their economic background and emphasis on economic, industrial growth by the state as a way to change your financial status in a better way influenced their way of experiences living with pollution. For that reason, a phenomenological study was the best option to focus on responses and understanding of their responses.

3.3 Writing Process

Writing is a never-ending process – during fieldwork, I often found myself analyzing, coding, and writing small parts of my thesis. On my off days, I did transcriptions and digitized my handwriting notes.

Even if I tried to take field notes every night, it was hard to recall from memory as I spent all those hours under the sun. I transcribed my data as I wanted to learn more about the data and how to process it for fresh researchers. The transcription took longer

than expected, but each interview piece made me rethink my data, concepts, and subthemes. The common themes started to become more certain after I spent considerable time with the transcripts.

I read my written transcripts several times and sometimes went back to listen once more to understand what my respondent was trying to share with me. This inductive process of data enabled me to focus on some concepts more than others. So I found the chance to talk over my subthemes with my earlier participants before I left the field.

As I started transcribing while I was in the field, I had the chance to see my weaknesses in terms of how to handle interviewing process. I often realized that I was interrupting my participants even if they wished to continue. Sometimes I did the otherwise. I did not ask further questions to involve them in the topic. Instead, I let them continue telling their stories that seem to be irrelevant to the topic. Obviously, this was a positive result of the inseparability of qualitative research's data collection, writing, and analysis process (Silverman and Marvasti, 2008).

Throughout my fieldwork, I kept a research diary to see how I feel, sense, and think about this new place, people, and the experiences as a fresh researcher. Then I realized that even my small talks with the people that I shared my home in Darıca were also part of my research analysis. To give a more vivid example, I remember taking a photo of rotten plum in one of the participants' gardens near an industrial pipe. I showed this photo to my friend, who I lived in Darıca, thinking she would agree with me on industrial facilities' impact on the environment. Contrary to my belief, she found it very normal, and she said she could eat that plum since the fruits in their gardens sometimes look the same. She said maybe there was a deterioration related to the weather change but not the industry. Then, I found myself questioning why people don't believe that the industry is harmful to them? My friend was an engineer who graduated recently and looking for a job in the aluminum industry may not be the person who would challenge industrial pollution.

3.4 Analysis

I used the Maxqda program to analyze my data. I prefer to use an interpretation-focused coding strategy as "meaning making is the main characteristic" and able to address my research question (Adu, 2019, p. 32). Indeed, I also used description-focused and presumption-focused coding, if necessary, as both enable to support my description process of data. Coding, for me, is a way of delving into the details of words and sentences.

While analyzing my data, I always wondered: What was the key point of those stories. As my questions started with an understanding of why they live Dilovası, in which aspects did they liked or disliked being in Dilovası, their future expectations living there concerning the industrial existence, I was able to analyze their motivation living there. There were some absurd moments, of course, when I asked, "How do you see the future of the industry and Dilovası? Do you think living together is possible? Because they usually gave the following answers: "We are already living with industry."

With this thesis, I shared my interpretations of research to be shaped through your interpretations. Like Adu (2019) highlights that participants' personal history, family traditions, lived experiences, and mine as a researcher shapes the interpretation process altogether. In the end, as a researcher, I interpret an interpretation. All in all, this research turns into a collective interpretation process involving the participants, me as a researcher, and you as a reader.

CHAPTER 4

LIVING IN AN ENDANGERED ENVIRONMENT: THE CASE OF DILOVASI

This chapter examines the economic and political aspects of Dilovası's unresolved pollution problem. My goal in this section is to demonstrate the critical role of migration, politics, unplanned urbanization, and industrialization play in forming the framework of environmental pollution problems. I first start with the environmental changes observed by the locals in Dilovası and their history of migration to this area for financial reasons. As different industries began to invest in the area in the 60s, migration from the East and North started shaping the demographics of Dilovası for the future decades. In the following years, this small place became known as one of the industrial hubs of the Marmara region.

4.1 Contaminated Homes but Homes Anyway

Almost all the interviewees for this study resided in Dilovası for at least five years, and most have been there for over 30 years. To them, Dilovası is identified with its 'close community relations' and village lifestyle. Often, participants characterize Dilovası as one of the best places to live because of the close relationships among the residents. Many emphasized how easy it is to leave doors unlocked and allow children to play until late at night because of the community's trust. However, the respondents see the lack of social activities in the neighborhood, such as youth centers, children's parks, and cultural centers, and being so close to industries as the district's negative sides.

This result may be explained by the fact that environmental degradation also negatively impacts individuals' quality of life (Irwin et al., 1999).

Furthermore, almost all respondents agreed that industry was already there when they moved to the area. It is underlined that many people in the region came to Dilovası to find employment. The majority of my interviewees said they moved to Dilovası, primarily because of limited employment opportunities in Turkey's Eastern and Black Sea region. Unlike the job-rich Western part of Turkey, mainly İstanbul and nearby cities, the Black Sea and Eastern regions far from the metropolitans of Turkey do not have a long industrial past. Since industrial activities are seen as a source of income and better living conditions, many interviewees decided to move to Dilovası to meet their social and economic expectations. The industrial settlement started early as the 1960s in Dilovası with the opening of the Izocam factory (Turkish Medical Association, 2012). In line with the industry's growth in Dilovası, a migration movement from East to Western Turkey is likely to be found. Finding jobs was something I repeatedly heard from my respondents, and this reasoning summarises their understanding of why they moved to Dilovası. The following comments by a man in his 60s indicate:

> Our reason is the same as the most common reason: economic conditions. I came from Ağrı, where the economic opportunities were limited, and the land was barren. That's why we are here now. People migrate wherever they can support themselves (Faruk, M, 60).

Following that, another respondent said:

> We have been living in Dilovası almost for 30 years. After completing my education, we moved to Dilovası as a family because of the job shortage in the Black Sea region. We had the chance to go to a better place, but we thought that job opportunities would be higher in Dilovası. When we arrived, many people also came with these feelings (Ahmet, M, 53).

Between 1960 and 1980, many newcomers managed to find jobs easily because the number of factories in the area grew at a fast rate during this period. A woman in her late 20s explained to me her migration stories as like this:

> My father was born and raised in Ağrı. They moved to Yozgat in his adolescence because of poor economic conditions. There were no jobs in Yozgat as well. They got poorer and then decided to move to Dilovası because our relatives already living here told my father that it was easier to find a job in Dilovası. So, they came here to earn money (Ayşe, F, 29).

Another woman also pointed to soil infertility in the Eastern part of Turkey and the unemployment period impacted why they moved to Dilovası:

> When sugar beet production was banned in Iğdır, my father moved our family here because of poor living conditions and high unemployment in Eastern regions. It was easier for us to start a new chapter here as we have relatives. We had economic reasons (Sevil, F, 40).

In addition to job opportunities, many residents commented that their relatives praised the better environmental conditions who came to Dilovası earlier. In accordance, sometimes my respondents remembered the beautiful past of Dilovası as one of the other reasons they prefer to move here:

> My grandfather was a building contractor working in Istanbul. He sees vineyards, peaches, and cherries as he passes by Dilovası. Then, he decides to settle. This is the story of why we come here (Halil, M, 40).

Beginning in 1990, Dilovası has transformed into an industrial hub where many foreign and national companies started their businesses. In the literature, many scholars discuss whether polluting industries brought into poor and ethnic minority regions on purpose, or the people prefer to come because of high job opportunities (Bullard, 1983; Mohai and Bryant 1992; Pastor, Sadd and Hipp, 2001). When I asked the same question to my participants, two divergent comments emerged. In Dilovası, residents fall on either side of the argument: while many express that they came here to work, as the above quotations clearly state, another group of participants commented that they were here before the industry. For example, Ragıp said:

> Indeed, the factories were also here when we were kids. Although some industries claim that they were the first ones here, such a thing is not possible as local people called "manaf" were always here. They have 600-700-year-old villages here (Ragıp, M 37).

I also observed that while people living in central neighborhoods of Dilovası mainly migrated from the East and the Black Sea regions to work for industries, the residents of Çerkeşli, Demirciler, and Köseler area, and their ancestors were living in Dilovası before the establishment of industries. A possible explanation for this might be that the first industries, such as Çolakoğlu Steel, İzocam, a well-known insulation sector, and Diler Iron-Steel, settled in the center. As an expected outcome, many move into Dilovası to close work opportunities.

Last but not least, because of the village evacuations during the 1990s in Kurdish provinces, many people decided to move to Dilovası with the expectation of finding work quickly because they had to flee without anything. Different opportunities existed for those first comers depending on which parts of Turkey they moved to Dilovası. Although the main reason to move to Dilovası is to find a job, the people's motives and conditions while moving are also worth noting. Unfortunately, this thesis is unable to explore this aspect in detail due to the lack of data regarding Kurdish evacuations' impact on the individual's lives and the living experiences in Dilovası.

Furthermore, many relatives of the first settlers were eventually drawn to the region for the same reasons. Nevertheless, since who came the first question does not extend beyond our analysis to an understanding of what it is like for individuals to live in a polluted environment, the following section dwells upon how residents perceive their exposure to dangerous pollutants, which has increased in time.

4.2 Defining Pollution

This part of the thesis focuses on the long history of environmental pollution and its meaning for the residents of Dilovası. It shows how pollution impacts both humans and non-humans, uncertain sources of pollution, geographical location, and the emerged coping strategies shaping people's lives. Yet, it asks how one's proximity to polluting facilities and types of those facilities impact people's views to determine possible health risks and toxic risks. For participants in the question, indeed, describe neighborhoods pollution problems differently. Becoming affected by pollution is not

easy for individuals to understand and prove. Yet, in the early 2000s, the immediate health effects of animals led locals to wonder whether their water was poisoned or not. Prior to 2006, many people in the region noticed pollution problems and began asking questions about their environment and the causes of the death of their animals. It is also clear from interviewees that health problems were first dominantly related to animals' health. Necati, who moved to Dilovası with his four brothers to work in the construction of factories in the early 1960s, reminisced the story of his first experience with pollution as follows:

> After 2004, my partridges started to die. They were born with crippled, crooked beaks and legs. Hundreds of fish were found dead in the Dil stream. I was sure that it was related to pollution, so I asked one of my friends to take photos to send to television channels. We planned to show it on Turkish TVs, but they did not dare to show it. Then, we decided to send it to German televisions, and they broadcasted on television. Then, it also took the attention of Turkish media, and many channels came here to take photos (Necati, M, 76).

Indeed, in some cases, people compared their health status to non-humans' health. For instance, Aysu states that:

> It is almost impossible to grow flowers here. Here, we all have our gardens, we plant flowers and vegetables, but an oily layer stick on the surface. They do not flower because they are showered with ash from chimneys. Our plants are slowly dying here, just like us (Aysu, F, 50).

For Aysu, taking care of their health and seeking medical help seem pointless as long as they continue to live near smoking chimneys. Another respondent, Ali, who believes that the pollution has a detrimental impact on plants stopped gardening altogether, states that:

> Our trees are dying. We try to save our dying trees with medicines like us. I don't plant anymore because it is time-consuming when you know that they will not bloom (Ali, M, 68).

The above quotations show us that people who connect their health with plants are also compatible with Armiero and Fava's (2016) study highlighting the connection between human and non-human health. In their research, Armiero and Fava also show

us that inequalities at the core of the capitalist system shape human and non-humans' environments and cause both to suffer from consequences.

Figure 5. Necati, while showing the inedible fruits from his garden

Photo by the author

Further, Necati, who showed me his garden and allowed me to rest under the shade of his trees, responded to my question, "If all those plants will die and you already know it, why do you continue to plant them?". He answered as:

> I plant them because I like to sit in tree shade, and they also help clean the air we breathe. Trees help clean the air and might lessen the smoke's effect on my garden. I know that their fruit is inedible, so I plant them to sit in its shade and for its greenery (Necati, M, 76).

Many of my respondents told me that they were very conscious of the pollution problems; for instance, Ragıp says that he felt pollution with his five senses, stated that:

> There's probably no need to experiment with environmental pollution here. We live in an area surrounded by industry. Of course, we will be affected. Here, we sense pollution through our five senses. Sometimes we feel our nose burning. We can't breathe when there are strong odors. I'm not even talking about visual pollution; it is obvious. Noise pollution as well; it is not possible to stay out when some factories operate - it is that loud (Ragıp, M 37).

Further, he suggested that I should take pictures in the morning and evening to understand what he meant and pay attention to noise and smell, which change during the day. The use of sense in environmental awareness is also the case discussed by Armiero and Rosa, who revealed the connection between smell, place, and environmental justice activism (2017).

On the other hand, most respondents said they do not take any precautions since they do not notice pollution. However, a few respondents said they dry laundry inside and close their windows and doors to prevent air pollution. In that sense, many individuals commented that pollution is no longer a topic that locals talk over. While many people perceive pollution as an ongoing problem, others say they are getting used to it and sometimes not noticing it. Likewise, Hamza, who underlines that resident of Dilovası do not think much about pollution as outsiders do, noted:

> We are used to living in polluted air; we got used to it one way or another. We remember when you ask, but other than that, it's something normal to us. No one thinks about air pollution in our daily lives. Our daily hassles are enough for us. Sometimes it smells gas, but it passes. We only notice pollution when we see a cloud of smoke coming out of the pipe or the gas smell inside our nose. Other than that, people are used to living in dirty air (Hamza, M,47).

Such claims of participants about getting used to the gas smell and accepting it as normal are consistent with those of Adams et al. (2018), who noted that some of their participants also do not bother, instead interpret smell as part of living next to an oil refinery.

Further, when I asked if pollution is really on their agenda, Esin told me that when she first moved to the area, she thought there was a gas leak but then realized it was the fumes from nearby factories. She also added:

> A foul smell is always with us. It's the same as it was 30 years ago. Even if it does not affect that much during the day, it smells like poison when you open a window at night. It smells bitter, but we are used to it. We only notice when our guests complain about it. People who don't live here can notice the odors quickly, not us (Esin, F, 33).

4.3 Health and Environment in Dilovası

One of the most significant effects of a polluted environment is related to health risks. Inhaling polluted air brings a higher risk of asthma, respiratory diseases, and many newborn problems such as diarrhea and early bronchitis during childhood and later life. More importantly, this thesis also shows that health inequalities, environmental quality, and socioeconomic status are linked (Boyce 1994, 2008; Cushing et al.,2015; O'Neill et al., 2003). Multiple exposures to environmental bads and the resulting poor quality of life among low-income groups have also been noted by previous studies (Evans and Kantrowitz, 2002). In this regard, Dilovası where four organized industrial zones, one coal processing site, several ports, and two highways located, but no green spaces for the community to enjoy, low quality of housing, poor income levels, demonstrate that people are suffered even more extreme inequalities concerning housing, health, social space, and socio-economic status, as well as contamination. Besides environmental risk concerns posed by the industries, high traffic roads threaten the lives of residents and contribute to more pollution problems (Burningham and Thrush, 2004; Checker, 2007).

4.3.1 Experiencing Health Problems

This part of the thesis focuses on different awareness of health impacts among the participants. The below quotations shows that health concerns are experienced in different manners by individuals. Even Dilovası residents, who lived nearby industries for years, did not certainly relate their ill-health to polluting industries. While some residents were very sure that the state of their health was linked to air pollution, others did not find a clear sign of their health and industry. While I asked if they had any

health problems related to industrial pollution, Onur said, “Most of the people here are living with asthma, bronchitis, and chronic obstructive pulmonary disease. These diseases are widespread. My son is 14 years old and has asthma (M, 44). For Onur, while his son suffers from one of the common diseases of air pollution, he contends that they cannot be sure whether it is related to living close to industries or not. On the other hand, few respondents were convinced that ill-health and exposure to industrial contaminants from an early age are related. For those, living near factories caused chronic health problems of babies and the coughing of children at a young age.

At the same time, one of my participants included pollution’s negative impacts on child development. In this case, Sevil, a mother who cares for her children and does everything to make sure that they are healthy, worries about her children’s growth and development. Sevil describes how she realized that:

> Our relative’s children are growing up faster because they live in Darıca. My children are not growing at the normal rate for their age. They are all the same age, but my children don’t grow as fast as they. It must be related to all those factories and their pollution (Sevil, F, 40).

While listening to Sevil, several other female residents also complained about how hard it is to raise healthy children here. Bronchitis is said to be a common disease among infants. Even this thesis cannot be able to explore why there are so many health problems in the region; it tries to look at some of the relations and connections surrounding this issue. In line with this, one respondent further underlines that: “Dilovası has around 51 thousand people, and nearly 4 thousand of them are disabled”. As in the case of the high disabled population living in Dilovası, we need to be able to talk about the possible relation between public human health and environmental relations. Most importantly, as Checker (2007) pointed out, the ill health of children may cause caregivers to quit their jobs in order to focus on care for the child, is a vitally important aspect if we want to underline the impact of ill health and the link between and a variety of factors such as poverty and gender inequalities.

For instance, the unbearable cost of cancer treatment for low-income groups in contaminated regions in China was also noted by Liu (2010). Moreover, according to environmental public health reports and environmental activists, those increased health costs of individuals damage budgets and increase government expenditure on health (HEAL, 2013; 2021). The public health problem in Dilovası shows us this vital aspect of how much money is spent on preventing pollution-caused illnesses. One of my respondents who has cancer mentioned that the state covers the drugs used in cancer treatment. According to Enver, lack of industrial pollution control costs the government more money out of pocket:

> Our health problems also increase the healthcare expenditure of the state. Increased medical spending is a significant burden on the social security fund system (Enver, M, 42).

It seemed that for those respondents, if the industrialist had spent the money on newer technologies and filters, maybe they might not have had these health difficulties. Indeed, many residents and the families' income further exacerbated since the ways in which prevention from pollution is seen as an individual solution. However, for many people, especially those that live on minimum wages is not easy to provide health solutions for themselves. For instance, Hatice reported that they could not follow what the doctors said:

> When we see doctors, they mostly recommend moving somewhere else and buying an air purifier and bottled water. They also advise us not to smoke, but it is pointless since they breathe polluted air daily (Hatice, F, 43).

From the residents' perspective, what the doctors recommend is believed to be unrelated since they do not share the same economic difficulties:

> The doctors here say to drink bottled water. I live on minimum wage. There are five members in my family. It is almost impossible for me to buy bottled water. Shall I spend my money on water or bread? They do not understand the conditions we live in (Celal, M, 41).

Therefore, it is likely that environmental pollution problems have left many families of Dilovası in worse economic conditions than before with the increased health

expenditures. Other respondents pointed out that, while some people may have health issues, it should not be correct to conclude that the industry is making people sick. Here, it is essential to underline that even for those who can't attribute health risk to environmental pollution, this was more related to health problems that exist due to their work conditions. Sevil expresses why she cannot point to the industry as the reason for her husband's ill health:

> My husband's lungs are affected by dust. We are not sure whether it is an occupational disease or related living next to factories; it might be both. Because of his poor health, he is having trouble finding a new job. He believes that living in Dilovası affects his health negatively. That's why he is looking for jobs far from here. He wants to work in cleaner, healthier air (Sevil, F, 40).

A similar confusion to the attribution of health risk to industries was noted by Luginaah et al. (2002), who found that being close to dangerous substances both at work and at home makes it difficult for people to point out the root cause of health problems.

Further, when I asked about how they feel when they go out of Dilovası, several people responded that going somewhere else was affecting their health in better ways. To give an example, a woman who left to go to university and back recently said:

> I realized that I feel better when I go somewhere else. The feeling of tickling in my throat passes when I am not in Dilovası. It should be related to polluted air, I don't have a diagnosed disease, but I can feel it (Cansu, F, 25).

Similarly, another woman said that she felt better when she visited her sister:

> I always have headaches, but they go away when I go out somewhere else. I take pills every day, but when I see my sister in Çanakkale, I do not take them with me. I don't need them there (Sevcan, F, 64).

Surprisingly, many others believe that they feel worse when they leave Dilovası for a short time. For instance, Fatih comments on his experience as follows:

> I think I am used to the polluted air here because when I go somewhere else for a week, I feel like I can't breathe and get a headache. The effects of clean air

> seem to be much more dangerous for us as we used to breathe polluted air (Fatih, M, 49).

Phil Brown defines “environmentally induces diseases” to offer the narrow definition of environmental health problems to point potential impact of environmental toxins in nearby communities (2007, p. 2). Dilovası, where a small place hosts many hazards, the sources of health problems are not individual problems. Increased asthma and cancer rates are very likely to result from exposure to pollutants for years. Although it is possible to view all these residents’ comments as proof of their ill-health related to living close to industries, in Dilovası, many people haven’t had their diseases diagnosed by a medical professional yet. Most importantly, it is not easy to prove the causation between ill health and environmental problems. Still, many residents of Dilovası feel and know that industrial pollution worsens their health.

As Brown (2007) put it, it is necessary to involve local knowledge and local environmental justice groups’ experiences to link to the environmental health movement. As pointed out in previous sections, the studies that discussed environmental health problems in the region match local experiences. For example, the woman who mentioned his child’s delayed growth resides in the Diliskelesi neighborhood, where Yavuz’s (2012) research on the influence of mother's exposure to pollutants on newborn growth was conducted.

4.3.2 Gender Inequality and Pollution

Pollution affects everyone, but women are certainly taking more responsibility to prevent it. Gendered roles are the main cause why pollution affects women disproportionately. In my fieldwork, it was also evident cleaning was directly associated with women’s duty in almost every conversation related to how one copes with pollution in daily lives. While men mostly complain about the dust on their car or the dust inside their working area, women complain about how hard it was to keep the home clean. Many women hoped to get rid of dust by mopping the house every

day, but many already gave up as nothing changed. Halime, for instance, comments that:

> We always clean the house. Even if we clean, the window looks dirty again because of coal dust. Our electricity and water bill is too high, so we prefer to close the windows even if it's too hot. To have a clean house is just a dream when you live in Dilovası (Halime, F, 31).

Nonetheless, those different types of exposure to environmental problems elevate the detrimental impact on one's health status, which has also been highlighted in earlier studies (Evans and Kantrowitz, 2002). For instance, trying to keep the house clean may have psychological impacts, and as the below quotation illustrates that cleaning consumes women's time which could be spent on another activity:

> I almost spend more than a five-hours each day cleaning. I am not sure how it gets dirty so quickly. I dust and mop the floor every day. I became obsessed with cleaning because it never stays clean when you live next to factories. I do not even open the windows and doors so it doesn't get dirty again- but it still does. Because of all this, I do not feel psychologically well either (Belgin, F, 29).

While in Dilovası, pollution problems have many sources, one thing is sure that gendered implications of pollution can be observable. I did not meet with any women who were not worried about their children's health either in the past or now, but I talked to many men who sometimes told me that they do not worry about the pollution impacts because they do not notice while working. Since most women I talked to are invisible homemakers, which means that they spend more time cooking, cleaning, and caring for their children at home, women may likely be exposed to pollutants. Just as importantly, most of the men I talked to were also working as welder or chemical industries are potentially exposed to workplace hazards. Therefore, the negotiated impact of polluters in individuals' lives and especially the gendered impact of pollutants is worth studying to further understand multiple public health issues.

4.4 Power relations between state and industry

Undoubtedly, many residents of Dilovası engage directly with the pollution problems, which have increased mainly between the 1990s and 2000s. In this part of the thesis, I discuss the environmental degradation observed by locals and some viewpoints of locals about the state's inefficient role in regulating the industry.

In many ways, the residents are witnesses of both industrial growth and pollution problems. In other words, while industry provides jobs to many who had limited opportunities in the Black Sea, Eastern and Anatolian regions of Turkey, the pollution problems increased with the factories that do not regulate their environmental impact. Thus, while Dilovası's population increased with the number of people who escaped poverty, industries continue to grow as foreign firms' collaborations are sought and encouraged by the state. For example, when I asked how industrial processes changed Dilovası, many underlined that there are accounts of change from a summer resort to a polluted place:

> There were grape, cherry, plum, and peach vineyards when I came here. This place was like fruit heaven. Dilovası was one of the closest places to Istanbul like this. With an increasing demand for both industry and employment, the population of Dilovası has also risen quickly. Many people from central Anatolia, Eastern Anatolia, and the Black Sea region came here to find a job. Now, Dilovası is like a small Turkey. Most importantly, the industry started growing as the industrialist knew it was a cheap, easy, and unregulated place to start a business. The industries took advantage of this opportunity, which caused an unplanned, unauthorized urbanization process. Later on, heavy industries were established without any criteria and control mechanism. The most polluting industries, heavy metal, iron-steel smelting plants, and chemical-paint companies squeezed into this small area (Ali, M, 68).

In retrospect, participants were aware of the growing existence of the industries. As Dilovası continues to grow both in terms of population and industry, this small place turned into a district in time. My participants also closely observed how Dilovası's population had been shaped mainly by politics and vote concerns. One participant offered an explanation for demographic changes and politics:

> The first mayor brought many people from Ağrı and Kars to ensure his votes were certain. People also agreed to come here because of promised works in return for votes. At that time, many were coming without even knowing where Dilovası was (Mehmet, M, 50).

Importantly, this expansion of both the industrial and the residential areas over the years also tells another side of the story where residents blame the state for not having control of neither residential nor industrial growth. Necati, an elderly man living in Dilovası for more than forty years, emphasizes that many factories and residential areas have been built in a short time:

> It is all the governments' fault. I was permitted to build my home in the 1970s. Next to me, there was a giant factory. I had no idea that those factories would poison me in the following years. The state should have known that possibility and shouldn't have let me build my house. Most people here say that there was no industry when we were here. The industrialist also comes with documents showing that they were built in the 1970s. It might be true that some factories were first here before we arrived. But most of them you see now are built after people came. Everything here happened so quickly. Those small factories turned into large factories and, as expected, attracted many new workers to the Dilovası. Once they expanded without any restrictions and laws concerning the environment, pollution increased more than expected (M, 76).

What the outsiders needed to understand was that "everything is due to a lack of planning of industry and also due to the weakness of our state," Necati argued. After he affirms that the state has no power to change anything, he further adds: "Unfortunately, we have to live with it. I suppose it is our destiny" (Necati, M, 76).

This view was echoed by another informant who believes that nothing can be done to protect locals' health if the state continues to give them permission to grow:

> Hundreds of factories are still being built after those warnings about human health. Everyone knows government allows factories to be built. As long as politicians, local administrators favor industrialists, not the local people, and if bribes pass from one another, there is no chance of living with industry. They do not think of people's health; they only spend money to bribe the local administration (Ahmet, M, 53).

Undoubtedly, as industries increased in this small town, people began to suffer from many health problems. Between 2001-2005, many doctors, especially Prof. Dr. Onur

Hamzaoğlu was interested in showing the multiple pollution problems in the region resulting from industrial pollution. Suppose we need a point at a time when industrial pollution problems were first recognized and treated seriously. In that case, we can go back to one of the key studies in Dilovası, which stated that cancer rates in Dilovası were three times higher than the world average. With that study, information about the contamination in Dilovası became known by the general public. In time, the region's environmental pollution problems and high cancer rates have received considerable critical attention both by media and political parties as a public health issue. At the same time, the state decided to do new research in the area. Commenting on the state's report on Dilovası, Haydar expresses how the development of new industrial zones despite the report's health and environmental risk is a good illustration of the state's weakness:

> The parliamentary research commission report highlighted the risk of industrial growth in Dilovası. The report strongly recommended that no more factories should be established in the region. They said it would be a disaster if more factories were built here. That four other Organized Industrial Zone (OIZ) were built after this report was published. Nobody listens here. There is a huge conflict in here where money always wins. It is all about money. They say those other industrial zones are cleaner and greener. But there are no zero emissions; there is no zero pollution. Those new ones worsen the pollution problem here (Haydar, M, 39).

While even the state published a report on environmental health problems in Dilovası, local municipality and industrialist sued Onur Hamzaoğlu for conducting false research and causing people to fear. After those several years, many of the residents I talked to remembered vividly those days and the injustices done to Onur Hamzaoğlu. The power of industrialists to silence the voice of science and the state's protecting role to dirty business received by respondents as the weakness of the state to protect its citizens' health. The state's connivance to the already polluting unregulated industry and the increase in pollution for this reason mirror those of previous studies. For instance, Skouloudis's (2017) study examined that within the industry, public, and state relations, the state tended to disregard the health of Asopos people not to interrupt industrial investments.

Generally, the lack of laws relating to industrial areas and environmental protection is believed to be related to high pollution risk and health problems. Between 2004 and 2021, many factories were established and are still being built. This contradictory situation in Dilovası causes many people to doubt the state's protection of fundamental rights like living in a clean environment. Many people's reasons for not believing the state's power over the industrialist were similar: the state allows the industrialist to do what they want even it does not comply with laws as long as bribes are given. For instance, Cansu describes it as:

> Even in some areas here that are protected by law, industrialists can do what they want. For example, one of the managers of the factories built a home next to the sea a couple of years ago, although it is not legal. The gas station was also built in the protected area (Cansu, F, 25).

In the meantime, existing pollution problems are interpreted by many respondents as a failure of current environmental laws. As the above quotations stated, the governmental decision of the state and its power have not been adequate in providing them with clean air and the environment. More importantly, conflicts between locals and industrialists emerge from the government's decisions that favor industrialists. One resident responded in a manner that shows how the state favors industrialists but not locals in many ways:

> They built chemical tanks in one of our neighborhoods. It is supposed to be illegal to construct so close to homes. But no one cares about the laws here. Here the rules, laws only work for the people. If you do something illegal here as a citizen, they will probably notice. But when industrialists built those tanks near to us, no one stopped them (Hakan, M, 57).

On the other hand, some respondents presuppose a similar and common process in which both industrialists and themselves are the victims of the government's weak decisions because they both pay for the land and are given permission by the state while one to live – the other to do business. One respondent notes a similarity like this:

> There is no chance to ask those industrialists to go somewhere else. They also bought the land as we did. We all have to live side by side (Aysu, F, 50).

Whereas Ragıp underlined once again the crisis emerged by state's decision which gives priority to industries:

> Bureaucrats say that industry also has rights because they are also the owner of this place. But what will happen to our rights? Don't we have a right to live in better air? The state is on the side of wealthy industries, not citizens (Ragıp, M, 37).

In many instances, pollution problems are taken as the outcome of not enough industrial regulations and lack of environmental laws. In line with that, for a high number of participants, the weak power of the state against industrialists was the reason for not protecting its citizens' health and environment. Pointing to the strong alley between industrialist and state, many residents also argue that local struggles and events end quickly because no one is on their side. In the following passage, Ali documents why local environmental organizations do not last long:

> The political administrations dispersed the members of the environmental associations. Most of the environmental associations formed by locals were silenced with financial support. For example, a factory owner gives 25 tons of reinforcing bar iron to the president of an association. You can build an apartment with that much iron. The industrialist is bribing you when he 'gifts' you something like it. And then a member of the associations can't oppose those factories' "dirty" business (Ali, M, 68).

Most residents also say that locals are threatened by losing employment and being arrested. Thus, collective ways of taking action are notably blocked by fears of unemployment and imprisonment. Like many locals, Erdal also does not prefer to join environmental struggles because he is concerned about who would care for his family if he is imprisoned one day. He describes why he gave up as follows:

> Nothing changes here. Speaking up is hard to do in here. Once there was a rotten smell coming from the treatment plan, we went there to talk. Then, the mayor, governor, and police have also arrived. We planned to organize a small protest, but the police officer threatened to arrest us; we returned to our homes without solving the smell problem. You can't do anything against the police because you have a family to care for. This happened 2-3 years ago, and I did not participate in the protests since then (Erdal, M, 35).

It is also apparent from the preceding quotations that men spoke more about women in terms of industry' past, the link between industry and state, and current environmental issues. Women's lack of participation in environmental protests is also evident in Dilovası. When I ask why women did not participate in environmental organizations or participate in demonstrations, many women point to conservative family relations and gendered hierarchy as important precursors of being unable to active participation. Nevertheless, knowing very well that municipality and even state does not have the power to impose sanctions on the dirty business of the industries, Zehra mentioned how she gave up at the end to take action:

> Sometimes it smells a lot. You start to inhale something like gas, and you feel a burning in your throat. I call the municipality when something happens. They say they will take care of the situation, but nothing changes. The municipality does not have a chance to impose sanctions on industrialists (Zehra, F, 50).

According to some of my respondents, the main aspects of pollution have included political pollution as well. They defined pollution within the result of a distorted political system that closely aligned with the industrialist. Here, the most significant concerns are not just central to environmental pollution but also a flawed political system that industrialists heavily influenced. Erdal defined political pollution as:

> The pollution problem in Dilovası is the result of the distortions experienced in the bureaucracy and local administrations in the past, a conflict of interest, and the chain of mistakes that have occurred. Those conflicts here are caused chiefly by money. Everything is done for the sake of money, for the sake of profit here. In the past, we were not close to the industry as today. We now suffer more from pollution because of all those dirty political tricks. Even a headman (Muhtar) sold some parts of our neighborhood to an industrialist for money (Erdal, M, 35).

"As it happens, we live in Dilovası," he says. Erdal finishes his sentence by adding positive comments about Dilovası. He comments: " We love living here, but the politicians who want to make money from here make this place unsuitable" (Erdal, M, 35).

As the above quotation clarifies, the unequal power relations between locals, state, and industrialists and between state and industrialists are somehow evident in the eyes of the residents. Residents now feel surrounded by industries and have no choice but to live with them due to the state's decision to enable the industry to grow even more. As many stated, whereas, in the early 2000s, there were only small factories and few significant companies; today, there are five organized industrial zones, one coal processing organized industrial zone, one marble quarry industry area. Mehtap explicitly referred to how the strong ally between industry and state guided the decision concerning neighborhoods and resulted in many factories coming to Dilovası:

> They are building a new scrap factory in the middle of the neighborhood. No one even talks about it. It became so typical here to see all those factories next to houses. No one is protecting the citizens, even the ones we vote for. The mayor, politicians, everyone knows what is happening here (Mehtap, F, 48).

In sum, the ongoing environmental pollution problems in Dilovası are the result of a complex tension between industry, state, and politics. It may be argued that the state has been unable to regulate industrial activities' impact on the environment. Hence, health problems were still not solved. Indeed, many respondents marked the mucilage problem in the Marmara Sea as a significant turning point in showing the public how industrial pollution can emerge as a problem that affects everyone. Luckily, as several participants noted, it also offers a last real chance to stop the polluting industrial activities. According to Faruk, who loves living in Dilovası but planning to move because of their children's insist on moving, mucilage shows us that the sea would not bear the effects of chemicals and waste dumped into it anymore. Faruk, like other respondents, further relates the pollution problem with "politics of pollution" (Bullard, 2005, p. 85). For him, state and industrialists know the reasons for the mucilage problem but prefer to blame others. He further identified a tension between state and industry where both try to dominate each other, but it may cost a sea to die:

> Mucilage is not only an environmental problem. It is also a problem of our democracy, local governments, and autonomous structures like the organized industrial zones that can dump into the sea. We need to tackle the roots of those problems to solve the problem of mucilage in the Marmara Sea (Faruk, M, 60).

4.5 The Benefits and Harms of Industry

Another important aspect is that not all respondents agreed Dilovası provided jobs to the locals. In the old days, they had at least one family member or a friend working in the factories. Nowadays, however, most of my respondents said that they do not work in Dilovası as they could not find employment here anymore. Living close to industries but not having a chance to work in them is consistent with the literature (Bullard, 2005). Like Bullard (2005) states, living near industries does not necessarily translate into more job opportunities for locals. During my fieldwork, I also realized that there is no guarantee that Dilovası people will have jobs. Even with the hope of finding employment and supporting one's family is the primary reason for living in Dilovası for most of my participants, many of the people I met mentioned the local's employment problem in the factories of Dilovası. Yet, they complained about working in distant industries rather than the chance to work in nearby factories, many times expressed as a priority problem, not the industrial pollution. My participants in question predominantly underline that although they live near five Organized Industrial Zones, they experience difficulties finding good-paying jobs when say they are from Dilovası. As Ayşe express that:

> Dilovası people can work only in blue-collar jobs, which last short term. They are primarily contingent workers, such as operators, drivers. Most of my relatives and my husband as well work in construction. Industrialists do not provide long-term and good-paying employment opportunities for people living here (Ayşe, F, 29).

Indeed, opinions differed on whether Dilovası provides jobs to locals or not. Among a few respondents, Dilovası is still one of the significant work destinations. For instance, Feyza, who moved to Dilovası recently after her husband lost his job due to Covid-19, puts that:

> There are many people from Kastamonu here now. They all came here to work in factories because there are no jobs in the Black Sea region. After finding a job, one person brings another (F, 50).

Moreover, Hatice pointed out that job shortage in eastern regions of Turkey was still a significant problem. She underlines that many continue to move Dilovası in the hope of finding work:

> Thousands of people migrated here and kept coming for work. The industry enables jobs to earn money to support ourselves and our families. We owe our bread to the industry. There are no jobs in Van, so our relatives also come here to work. It is limited to menial jobs, but still, it is better than nothing. My relative has a hotel where many people from the Eastern region stay (Hatice, F, 43).

However, there is a significant change. While back then, people who came to Dilovası expressed a desire to live in better economic conditions and better environments. Many who still come to work described their moving story more related to cheapest apartment rents and low house prices in addition to low-paid job opportunities. As Aygün, who has been living in Dilovası for five years now put it:

> We came here because the houses were more reasonable than in other places. My father-in-law bought a house, that's why we came. He purchased four flats and paid around 200 thousand a couple of years ago. You can't find a home like this anywhere else for this money (Aygün, F, 32).

As another respondent further notes, the most important reason for those who choose to live in Dilovası in recent years was low land prices and low rents in contrast to other districts:

> We bought our land and built a house two years ago. Back then, we paid around 150 thousand for the land price, and now if we wanted to sell, it would probably be worth 750 thousand (Merve, F, 34).

I interpreted these comments to mean that the long-term pollution problems of Dilovası and stigmatization of the region as polluted, cancer valley resulted in property depreciation. This further attracted many to buy and invest in Dilovası who do not have a chance to buy from elsewhere. Thereby, many people seemed to have agreed to move to a place known for its health risks in return for reasonable housing prices and job opportunities requiring low-skilled workers.

In other aspects, most of the young people I talked to said that they prefer to move away from Dilovası even if they could find work in Dilovası. They told me that they do not want to live in Dilovası because it is still associated with pollution and high cancer rates. They saw this as a dangerous place since they could not breathe fresh air. Most importantly, they pointed to the lack of social activities in the region as the key reason for their choice to leave, more important than environmental pollution issues. This outcome is contrary to Merrill Singer (2011), who found that younger people choose to seek a job and stay in Donaldsonville despite ongoing environmental risks, whereas elderly populations tended to leave if they could. In chapter 5.6, I will focus on different perspectives of locals about the reasons for unemployment in Dilovası.

CHAPTER 5

TOXIC CONTRADICTION

Even though most of the residents agree that pollution exists in Dilovası, they still seem to contradict themselves, saying they would continue living here or do not want to move somewhere else. Or arguing that other places are polluted as well. In this thesis, I argue that what Dilovası residents are experiencing can better be named "toxic contradiction." This chapter of the thesis aims to answer how toxic contradiction is experienced in different manners by Dilovası residents. Toxic contradiction is mainly the summary of residents' different experiences with different concerns, priorities in life, distrust in media, and livelihood experiences. One of the reasons for toxic contradiction could be that people have different political views in life, which may lead them to distrust scientific results in many cases. Similarly, I observed that people distrust media and politicians, which made them explain cancer valley news as a strategy of industrialists to chase local people from Dilovası. For instance, many residents I talked to did not believe that Dilovası has higher cancer rates than neighboring cities. Toxic contradiction is mainly experienced by residents who do not attribute polluted environment, not as a problem of Dilovası but a common problem for the residents of Gebze, Tuzla, and other industrial regions near to İstanbul. Toxic contradiction in Dilovası is mainly observed among residents who believe that cancer valley news is made by industrial polluters who want locals to move on their own to expand industrial areas. For those, nowhere is free from industries and environmental pollution issues. There were also many people who denied climate change.

This could be a similar case why they choose not to listen or believe scientific results about Dilovası's environmental pollution problems. Although air pollution is hard to escape, for many residents, it is hard to prove that they live in the worst polluted air since everywhere is already polluted at the same levels. Although most of the residents I spoke with did not express concern over the impact of pollution industries, they still preferred to move to the Tavşancıl neighborhood, which locals consider the best location to avoid hazards.

Moreover, individuals who experience health problems or have relatives diagnosed with cancer are unsure that their environment makes people sick since cancer can also be found in places with no industry. Many also believe that since Dilovası is only known for its cancer rates, but there is no research about nearby industrial place's negative impact on individual's health, this can only be explained that industrialists make that news on purpose. As a result, they do not believe that they live in a contaminated area despite many health and pollution problems. It is an unfair representation of Dilovası to lower land prices for many.

By toxic contradiction concept, I also reveal that family's cultural upbringing plays a vital role in understanding environmental pollution. Among my respondents who grew up in the Black Sea regions and Eastern parts of Turkey and moved to Dilovası to find jobs, their conditions in Dilovası are better than their relatives who still live in those places. The economic burden of living in a polluted environment still seems to be the best decision. This situation may also explain why Dilovası still attracts many low-income working-class populations and relatives of residents to the region with the hope of finding menial jobs. For those who moved to Dilovası to find jobs, their expectations of themselves and their children could be driven by a need to find a job and contribute to family income. One crucial driver for immigrant families is finding a job. They see it as a necessity of life. For someone who has relatives in Ağrı living in worse conditions than Dilovası, this place may offer more opportunities for their family. Different experiences and priorities in life and socio-economic positions may put every individual in different positions to consider environmental pollution. This

could also explain why they still support economic growth and industrial development even though it pollutes the environment.

Yet, individuals who experience toxic contradiction feel disappointed with the increased industrial investments and new factory opening in the area, but many remain hopeful that it will provide them jobs. Many residents also described how locals needed the support of industrialists to provide basic social infrastructures to their children and themselves. At the same time, many also expressed that if industrialists favor locals, not the politicians and local administrators anymore, there is a chance of living with industry. Toxic contradiction is observable in many individual accounts about living in different aspects of polluted environments. What is noteworthy about each individual's story is that neighboring districts such as Yalova and Gebze helped them describe Dilovası as a place that does not pose threats to their health since their problems are not different from theirs.

This chapter aims to revive the complexity of the issue regarding individual experiences living within contaminated environments. Yet, it recognizes that for residents, Dilovası is not an example of a sacrifice zone where people are willing to move but rather a place where people make meaningful relations in Dilovası where they called home.

In summary, the experiences of Dilovası residents do not fit into any existing arguments of contaminated communities but instead can be explained by "toxic contradiction" (Auyero and Swistun, 2009; Singer, 2011). I argue that this is mainly due to distrust in media and government officials, denial of environmental pollution impacts, distrust of scientific results, family upbringing, and socio-economic conditions. The following sub-sections enable listening to their stories to learn more about their different backgrounds and perspectives on living in Dilovası.

5.1 Ambiguity of the Sources of Pollution

Understanding the meaning of pollution for Dilovası residents necessitates a broader aspect, including who is responsible for the toxic environments. Being surrounded by multiple industries is also linked to another part of the problem: every neighborhood has unique pollution problems due to its location. Yet, it is not easy to describe some industries as dirtiest by respondents. For instance, while the main problem was chemical tanks next to their homes in the Fatih neighborhood, the coal processing site and their dust were the biggest concern in Kayapınar and Turgut Özal neighborhoods. Sevgi points that aspect as follows:

> I live in the Fatih neighborhood and believe that we are the most affected by pollution. It is not only pollution; here, we are also at risk of explosion because we live next to chemical tanks. They are so close to our homes; we can almost touch them. Indeed, we have no idea which chemicals are inside those tanks. There is no information on them (Sevgi, F, 48).

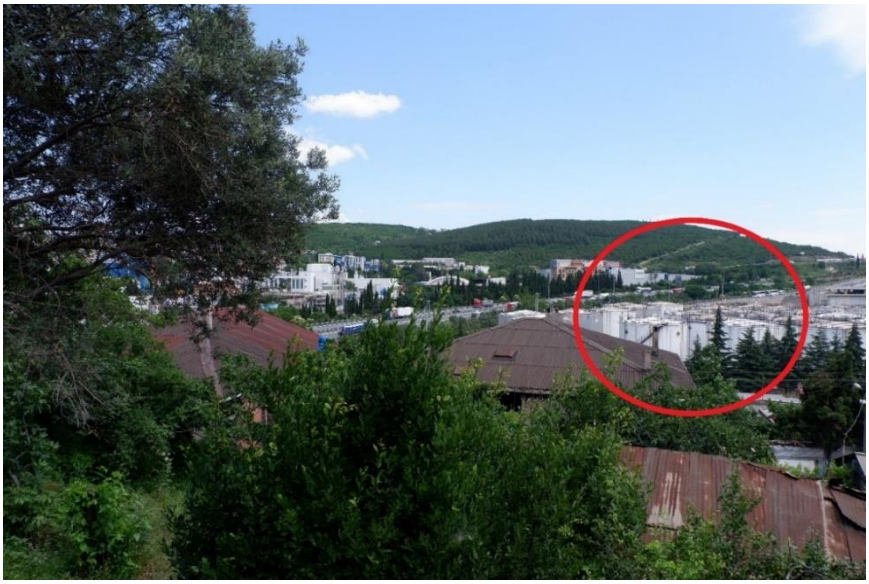

Figure 6. Chemical storage tanks next to houses in Fatih neighborhood Photo by the author

Like most contaminated communities, local people have limited knowledge about the dangers of chemicals and which chemicals are used inside factories (Auyero and

Swistun, 2009a). The uncertain source of deleterious health effects by chemicals found in water, air, and soil have also been noted in Auyero and Swistun's (2008) study. Indeed, as Zehra put it, one of them exploded several years ago:

> There was a massive fire, and everyone had been evacuated immediately. If a massive explosion occurs, it would not only affect here but the whole of İstanbul (Zehra, F, 50).

For her, it is irrefutable that a massive explosion will affect not only Dilovası but the entire Marmara region. By saying this, she also underlines that, even if they suffer from its consequences, everyone will pay the same price in the end.

Perhaps, the most crucial aspect of Dilovası is that every neighborhood at large is affected by some kind of industrial pollution. Given the diversity of pollution problems and community responses, many participants accepted one of the most toxic industries is the coal processing organized industrial zone built in 2012. Yet, they also stated that landfill area was one of the significant concerns of Dilovası. Thankfully, due to their ongoing protests, the landfill site moved to another location. Many people said their environmental concerns had significantly eased due to the landfill's disposal. Although many neighbors are opposed to its existence, the coal processing complex continues to operate. The location of the coal processing site, which is right next to the hospital and the school, is believed to pose a great risk, especially to the children's and patients' health. Thence, the relocation news focused mainly on with coal processing area since the coal dust directly impacts most people in their daily lives. Locals who protested the establishment in early 2012 continued their protests today. Like Armiero and Fava (2016) discussed, bringing more polluting industries to already polluted areas make less likely to determine polluters.

Thereby, polluting industries might tend to choose contaminated regions on purpose. After all, choosing an already polluted community can provide several advantages to new polluters. In Dilovası, industrialists may have deliberately chosen the establishment of coal processing and landfill sites built after 2010. Increased polluting industries in the area corroborate the earlier findings that discuss the path of the least

resistance argument (Bullard, 2005). Armiero and Fava (2016) called this, following the already polluted areas where the majority of poor and minority pollutions settled "Disneyland for pollution-producing facilities" (p.71).

Additionally, the many types of respiratory health problems are believed to be related to inhaling coal dust. In general, coal dust is more easily identified by inhabitants than other industrial facilities' chemicals. Although many of my participants focus on the visible pollution of coal dust, some concentrate on those other industries such as iron-steel and paint factories' potential hazardous impact on humans than coal dust. For instance, Faruk underlines that:

> I think coal dust does not affect human health as much as chemical and iron-steel industries' pollution. We do not know which hazardous chemicals have been released by those industries. But we know the health effects of inhaling coal dust. Here in the Diliskelesi neighborhood, we inhale poison, not just dust. Chemicals are more dangerous than dust. Dust cannot be the reason why we are sick. The reason we are suffering is chemicals related. Everyone here in Dilovası wants the coal processing site to move somewhere else. Still, no one is talking about the chemical, iron-steel smelting factory here, and they do not speak that much about their negative impact on health (Faruk, M, 60).

Faruk further adds that even if the state relocates the coal processing site, it will not benefit residents of the Diliskelesi neighborhood. Because they will continue to live under the threat of the release of chemical factories, but everyone will believe the pollution problem in Dilovası has been solved.

Figure 7. A scene from Diliskelesi neighborhood.
Photo by the author

In my questions, I wanted to find out what relocation news of coal processing site meant to the residents. Unexpectedly, some of my respondents merely approached my questions with suspicion. In one of our meetings, Candan asked me why I only asked about the relocation of the coal processing site but not the Dilovası Organized Industrial Zone. For Candan, the chemicals emitted by Dilovası OIZ were more poisonous than coal dust's impact on health. The misinformation and the uncertainty about the chemical's impact on human health prevailing in public are also consistent with that of Auyero and Swistun (2008). Similarly, they found different views among residents about oil, chemical, and lead's impact on health. Nevertheless, in their accounts of the industries surrounding Dilovası many of my respondents commented the geographical location of Dilovası makes it impossible not to be affected by environmental pollution. As Erdal noted:

> Where we live is like a bowl. For example, there is Noah Cement on the Tavşancıl side. On the other side, there is Imes OIZ, coal industry, cement industry, Machinery OIZ, chemical tanks, highways, and Dilovası OIZ. We're right in the middle of it. There are industrial buildings all around us. There's a highway right next to us. We are stuck between those. We are surrounded from all sides (Erdal, M, 35).

Erdal's point summarizes why it is so difficult for individuals to attribute potential health and environmental risk to one industry because they live like a bowl surrounded by all sides. Yet, the residents whose houses were usually located in the upper parts regarded their geographical position positively, although they were still close to the Noah Cement industry and upper OIZ's. According to those participants, the lower industries located at the bottom of the bowl shape are more dangerous because there is no airflow.

Interestingly, most respondents have stated that pollution problems were caused by the coal processing sites and the Dilovası OIZ, not the upper Organized Industrial Zones, which consist of factories specialized in machinery. This might also be related to the fact that most of the people working in Dilovası are employed by those upper Organized Industrial Zones. The economic dependency of the community residents to upper industrial areas may be acknowledged as the reason behind being more tolerant to their polluting activities than Dilovası OIZ, which was deemed the most poisonous and had no contribution to the community by many respondents. Moreover, as many stated, the upper industrial zones follow the rules, adapting themselves to technological change from the start. Concomitantly, residents expressed the belief that Dilovası OIZ and coal processing site are the primary reasons for pollution and health problems. The following section focuses on technological improvements' role in people's views about industries' polluting impacts.

5.2 Technological Improvements: Which industries are the most polluting?

The respondents who said that only Dilovası OIZ and coal processing sites cause pollution problems further claimed that those industries do not follow technological improvements. As many respondents underlined, Dilovası OIZ is one of the first industrial areas established in the early 2000s. According to many residents, they are more likely to poison them because of their old infrastructures and lack of technological infrastructures. Not surprisingly, many participants define new technologies merely as a way to reduce pollution problems. Many people have referred

to cleaner production and fewer problems associated with technological improvements in industrial production. Thereafter, they distinguish industries built in recent years as cleaner ones with their new technological investments. The older industries are referred to as dirtier and more toxic because it is believed that they could not adapt to new technologies. Hakan briefly explains this difference:

> The most significant environmental problems come from the iron, steel, and chemical industries. Those industries next to residential areas are accepted as Dilovası Organized Industrial Zone even though they were not first established with such a purpose. Unsurprisingly, the existing 60-year-old factories, which are now part of OIZ, are having difficulty adapting their systems to newer technologies. Those developed after 2005, on the other hand, are organized and planned; they were established once their infrastructure was prepared. So, they adapted to the technologies to follow environmental regulations. The main difference is that while Dilovası OIZ had factories long before it was declared an organized industrial zone, other OIZ factories were built after meeting the conditions (Hakan, M, 57).

Figure 8. Dilovası Organized Industrial Zone.

Photo by the author

Many comments by the residents went hand in hand with keeping separate the newer industries as clean ones since they use newer technologies, while the older industries

classified as polluters and responsible for the majority of the region's present pollution concerns:

> I think the newly established industrial settlements such as chemical and machine industries are better than the old ones because they use new technological equipment. Compared to old ones, İmes OIZ probably pollutes less. If those polluting industries agree to follow the rules and use the latest technologies, I can comfortably live next to them (Faruk, M, 60).

Faruk further asserted that it should be normal to live close to even nuclear power plants today as Europeans do. He thought that industrialists needed to develop their technologies very soon for the sake of our health and our country's development. Faruk's understanding is similar to that of many other individuals, who believe that if newer technologies in Europe pollute less, Turkey should also work hard to adapt those technologies. To give a similar response, Hülya comments that:

> For instance, you feel like you go on a holiday when you pass by a factory in Europe. They are all green and clean. Here too, if we develop the technologies, we can live together. If you take precautions, you can even have a picnic in the garden of the factories (Hülya, F, 33).

Following the newest technologies and rules to avoid polluting environments is seen as the dominant part of industrial activities. Residents' trust in technological solutions and their belief that newer technologies will alleviate risk concerns are consistent with prior research. Luginaah et al. also pointed out that zero risk and technological solutions went hand in hand among their participants (2002). Following that, Dilovası residents pointed out that they were pleased by new technological improvements and filters used by industries. As Seda says:

> In the past, you could easily see the dust cloud over Dilovası. But it is much cleaner now because factories use air filter systems. The present is beautiful and cleaner than the past. We used to clean our balcony and window almost every day in the past. We couldn't go outside in the 1990s because of the smoke. You couldn't even open the window when there was smoke or smell. It was terrible to even walk on the street while trucks spilled their load in the past. Many children died while playing on the streets. Now I open my window; ash is not filling in because they installed filters. The coal ash is no longer as much as before. But now everything is better (Seda, F, 58).

Seda's understanding of the dirty past and clean present resembled a view that many expressed. Some respondents who have been living in the area for more than a decade underlined that the Dilovası has changed significantly in a positive way. Many respondents expressed the belief that industrial areas used to cause health problems, but this has changed over time with the new investment and technologies. Reducing odors and smog is one of the best observable outcomes of implementing new technologies and filters. Yet, as the above quotations underline, for many residents, only upper organized industrial zones adapted those technologies and followed environmental regulations, for instance, using filters.

Figure 9. Dilovası Organized Industrial Zone view from Fatih Neighborhood
Photo by the author.

Although many are still not satisfied living in polluted air, the improvements in air quality from worst to almost better situation affected residents' view about Dilovası. Whereas for some residents, factories continue to release smog, they now pay attention to doing it at late hours. Industrialists' effort to deceive the public is criticized by many residents. As Candan stated, "You can never entirely rely on them. They are

continuously looking for ways to make more money". Similarly, other studies also found that residents' discovery that factories were releasing poison late at night reduced their trust in the government and industrialists (Luginaah et al., 2002; Luginaah, Smith & Lockridge, 2010).

Still, in Dilovası, I think the way residents remember past pollution worse than today also offers them hope. The potential hope in a contaminated area by juxtaposing past, present, and a more promising future is also noted by Neumaan (2016). For many participants, although new factories open in Dilovası, the air is still cleaner than in the past. Therefore, for many, it must be related to the latest technologies adopted by new industries. In considering why pollution problems did not worsen despite many factory openings than ever, many individuals come to the conclusion that upper industrial areas are clean and safe. These results reflect those of Neumaan (2016), who also found that residents of La Oroya attributed the worst conditions of contamination to the past and believed today's pollution problems is not bad as it once was. In Dilovası, thence, it can be argued that local's concerns about air pollution might be decreased with time. This situation also explains why many respondents feel anger towards outsiders who consider Dilovası as dirty. Because for many residents, Dilovası has changed positively in time but could not get rid of the stigma attached to it years ago.

All in all, it could be argued here that pollution did not affect and noticed by everybody in the same manner. It could be explained that proximity to the industrial zone played a vital role in the distribution of hazards. Therefore, houses close to Dilovası OIZ and coal processing site might more likely be affected by pollution. Thence, it is essential to understand what people think about solving the region's pollution problems. In Dilovası, respondents' claims differ from studies focused on the capitalist mode of productions' inescapable role in environmental degradation (Gould, Pellow, and Schnaiberg 2004; Schnaiberg 1980). Instead, they are consistent with ecological modernization theory, arguing that technological improvement will ease environmental degradation. According to many participants, pollution can be prevented by taking precautions, such as using filter systems, adopting

environmentally friendly production, following environmental laws, and regular inspections of those factories. While respondent's thoughts on the upper industries were positive, it is crucial to give place Duygu's comment which is working inside those factories:

> As a working woman in one of the upper OIZ's, I think they behave like we are modern slaves. They stopped giving tea, coffee during our break hours. They closed the women's changing room removed the yogurt and salad from our meals. No toilet paper in the toilets either, as you might guess. I wouldn't work if I didn't have to. Because of the pandemic, it is now harder to find a job, so my only goal is to pay my debts. The factories in upper OIZ might be cleaner, but they have no respect for their workers.

According to the central argument of the treadmill of production (Gould et al., 2004), destructive industries and their capital mode of production continue to degrade the environment and threaten the lives of lower-income groups who have also had to live with the polluted environment. Duygu's situation shows that even the upper industries perceived by residents as clean industries, the treadmill process still serves as an unavoidable logic underpinning the capitalist mode of production and industrial growth. At the end, treadmill logic continues to create new problems that threaten people's well-being.

5.3 Opposing Cancer Valley News: "No One Can Avoid Cancer."

According to most participants, many people living in Gebze, İzmit, and Kocaeli regions also face major industrial pollution problems. Still, unfortunately, only Dilovası is considered a toxic and non-liveable place. When asked about industries in nearby districts, the participants were unanimous in the view that everywhere in Kocaeli and İstanbul are fed up with industries and pollution. According to my participants, there is no difference in polluting industries when thinking about other regions. Concerning Dilovası's high cancer rates, many respondents questioned why neighboring industrial towns such as Gebze, which is only a 10-minute drive away, and other nearby industrial cities such as İzmit, Yalova, Körfez, and others were not mentioned with their potential health concerns and cancer rates. It is encouraging to

compare respondents' comments with those found by Wulfhorst (2000), who found that consequences of stigma either by good or bad way mainly shaped through the people's own beliefs and ideas. Likewise, many interviewees were also opposed to the stigma attached to Dilovası. In line with that, many asked me to turn my focus also on the other places, not just the Dilovası. For instance, Faruk insisted that petroleum storage tanks might be more dangerous than the industries in here that occupy the coastlines of Kocaeli:

> We are talking about Dilovası here, but houses are also next to petrochemical plants and refineries in Körfez province. What will you do with the places next to Tüpraş and Petkim? What about the homes near the Aksa chemical company, acrylic fiber producer of Turkey. Petrol refineries, chemical companies, paint industries, huge ports are everywhere in Kocaeli. All of them are dangerous and toxic (Faruk, M, 60).

There are similarities between Bush et al.'s (2001) study, which found that people living with pollution see the environmental pollution problem not only as a problem specific to the community itself but also as a problem that affects the neighboring provinces.

Lastly, one interesting finding is that, according to a large number of respondents, cancer valley news was part of a big plan. Concerns regarding the cancer valley news were more related to kicking people out of Dilovası, and this was widespread among the participants who believed that industrialists made that news. For instance, Hamza said:

> I do not believe that journalists have the power to spread cancer valley news that easily. I think potent industrialists help them spread the news since it makes it easier for industrialists to buy land when a place becomes a stigma city. Air pollution is also high in Kocaeli, Gebze, or İzmit, but no one calls those places cancer valley. There is no research about cancer rates there. Why? We probably breathe the same air; there are many polluting industries there as well. So, how is that possible? The cancer rates are three times the Turkey average in Dilovası, but there is no cancer research in Gebze, Kocaeli, and İzmit. I think everything has a reason; they call Dilovası cancer valley because they want people to move out (Hamza, M, 47).

For him, the high cancer rates represent a dilemma because toxic industries already surround everyone living near the districts of İstanbul. Moreover, beyond that stigmatization, industrialists also expect residents to move on their own. Several residents pointed out that the industrialist made that news to tarnish the name of the area, to lower land prices so that they could chase people. Likewise, Mehmet states that:

> I believe that making that news is intimidating Dilovası and us. I think industrialists make that news on purpose to get us out. We live in a critical location, close to main roads, ports, and railway. The cancer rates cannot be different from Körfez, Gebze, and Derince as we are all close to each other and surrounded by industries. That news is undoubtedly a part of a plan to move out of us so that industries can buy our land and grow their businesses (50).

Nonetheless, one of my respondents pointed out that even Turkish series show Dilovası as a non-liveable place:

> In a Turkish television series called Çukur, a woman who returned to her family house told her boyfriend that she couldn't breathe in here. She says, "I am suffocating here; help me to get out of here" ... I think it is all part of a big plan. They want people to move from here. That's how I understood. They want us to move (Ayşe, F, 29).

Further, what I found is that in at least some cases, participants believed that cancer news should be moved beyond its focus on Dilovası since it is a common disease in Turkey. Many respondents approach cancer gives me to focus on three aspects: first, the stigmatization of Dilovası as cancer valley does not make sense because for them, cancer is everywhere in Turkey; secondly, cancer is dependent on external factors like stress and lifestyle choices; such as eating preferences and smoking; and third, they think that cancer is destiny – it is up to God. Having some relatives who have cancer around them, many respondents refuse to believe that living in Dilovası led to higher cancer rates. Ayşe adds that:

> My father's relatives live in Ağrı. It has cleaner air and no industry, but all our relatives have lung cancer even though they eat organic vegetables. So I don't understand why people call Dilovası cancer valley. Cancer is everywhere; I think those who say Dilovası is cancer valley are lying (Ayşe, F, 29).

Respondents also pointed the lifestyle choices and their impact on the health status. As Sunay underlined:

> Cancer is everywhere now. Our health is affected by many reasons. Yes, there are polluting industries here, but traffic congestion, noise pollution, and stress also impact people's health. My sister lives in İstanbul, and she got diagnosed with cancer. Cancer is not related to factories; it is related to living conditions; even smoking affects your health. I know many people working inside those factories have no health problems, so I do not see any connection between factories and cancer rates (Sunay, F, 46).

One's destiny and God's plan theme came up, for example, in discussions of cancer rates also seen in other regions:

> I think high cancer rates are not related to industries. There is no industry in the Black Sea as much as here, but it has many cancer patients. Indeed, my wife's mom died from COPD while living in a small village in the Aegean region. She was not living close to industries. It is God's plan; we can't change our faith (Mehmet, M, 50).

Similarly, Derya, who has lost her husband to cancer, mentioned:

> I believe in faith. I lost my husband to cancer, but cancer is everywhere—God's work. Many people died of cancer even in my village in Ağrı, where there is no industry. People also die in small towns in Agean villages, so it is all up to God's plan. It has nothing to do with the industry (Derya, F, 62).

Still, many others agreed that there is a possible relationship between high cancer rates and polluting industries. One of my participants also shares that he wants to tell others about the relations between health risk and pollution but fails to do so as faith plays a vital role. Ali says that:

> When I go to the hospital, I regularly see disabled children and their moms. I try to talk to them and say that children's conditions are related to air pollution here. But they say God gave us those hardships, and it is our fate to live with it now (Ali, M, 68).

In this chapter, I show that increased stigmatized news about Dilovası over time, from a place where critically located, near railways, sea, and ports, turned to an impoverished one whom both place and people have seen as dirty and dangerous. In

turn, property values have dropped. Due to low property prices, more lower-class migrated to the region, hoping to have cheaper houses or find employment in nearby industries. However, as the earlier chapters focus on living nearby to industries does not mean that it will provide jobs to locals.

Dilovası's demographic composition today consists of low-income groups, which has inevitable consequences for understanding environmental risks, health problems, and industrial employment opportunities. Indeed, many people believe that even though industries negatively impact their health, they will have no choice but to stay in Dilovası because they have invested in Dilovası already by buying or building their own homes.

All in all, despite municipal efforts to revitalize the image of Dilovası with the slogan of Rising City in recent years, many of the participants underlined that the stigmatization of the region lasts for years, preventing investment in the area. Similary, Colocousis (2012) also found the pulp mill's adverse impact on the environmental pollution history of Berlin to be an essential factor in explaining the effort to revitalize the city's potential economy. Similar to Colocousis's (2012) study that shows one television program that gave place to the city's new air and environment promoted, one of my respondents also suggested a similar advertisement or campaign against the negative reputation of the Dilovası. The stigmatization of Dilovası has a significant impact on inhabitants and is always negatively felt among them because it affects their business, social chances, and relations with outsiders who consider people from Dilovası as dirty and dangerous. Despite many efforts resulting from stigmatizing, many interviewees express that they fear their future because Dilovası experiences population decline, which negatively impacts infrastructure services and future investments in the area. Yet, many inhabitants refuse to accept the media's creation of an appetite for stigmatized news about Dilovası. For those, close community relations that predominates the Dilovası is one of the reasons why they love living in Dilovası. The following section, therefore, focuses on residents' reasons why they stay in Dilovası despite the notorious image of Dilovası.

5.3.1 Staying in Dilovası: "I love living in Dilovası despite everyone believing that we are contaminated."

This section focuses on how viewing Dilovası as a cancer valley, dirty, toxic, dangerous, and non-livable through media engenders residents to be influenced by all those negative comments in their daily lives. This spoiled identity (Goffman, 1963) as this chapter aims to show that in many aspects cause residents to suffer from further disparities such as home devaluation, employment chances, and psychological well being (Edelstein, 2003; Link and Phelan, 2001; Skouloudis et al., 2017). Further studies point out that one's health status and overall health inequalities of the society are also affected by the stigmatization process (Halliday et al., 2018; Tran et al., 2020). Many of my participants underlined that people outside of Dilovası had stigmatized this place based on what they had heard in the news before ever visiting Dilovası. The notorious representation of many contaminated communities did not share the same level of support by locals, also explained by other studies (Neumaan, 2016). In Dilovası, for inhabitants, news and reports about cancer valley dismiss the beautiful aspects of living in Dilovası. For instance, many told me how much they love Dilovası and how difficult to find somewhere like here because of the good neighborhood relations.

Living together with individuals from all across Turkey and from diverse ethnic origins such as Kurdish, Turkish, and Laz was highlighted by many participants to demonstrate also how good community interactions emerged in Dilovası. For them, it was not so common to have those good relations anywhere else than Dilovası. Nonetheless, many participants claimed that Dilovası should come to the fore with its excellent community relations, not cancer valley news anymore, because such labeling contributes to further depreciation. These residents' claims are consistent with Atari et al. (2011), who argued that stigmatization adversely impacts government environmental pollution controls and community relations. Furthermore, the sense of

home is an essential part of why people love to live in Dilovası despite everyone outside of Dilovası recommending them to go out from Dilovası if they want to breathe clean air. In similar ways, Merve shared other's comments when she married a man from Dilovası and started to live here:

> When I got married, my relatives said, "Why would a bride go to poison valley, Dilovası"? First, I also got scared, but as I said, you can't find any place like Dilovası no matter what other people think of it. It has some smoke and dust, but despite everything, Dilovası is a beautiful place to live (Merve, F, 34).

As Merve's story indicates, it is not that people living in Dilovası do not deny living in a contaminated neighborhood. As many participants underline, they live in an area that may be more dangerous and polluted than others, but it does not lead them not to enjoy living in Dilovası. Whereas stigma appears to have affected many people's lives, and the image of Dilovası in a very negative way, and the fact that there is an ongoing and unsolved public health problem, many respondents shared that they love living in Dilovası because of the good relationships and strong social networks. In agreement with many residents, Hakkı, who lost his father due to cancer, recalled:

> I lost my father in 2008. My father had lung cancer. I told my father that I wanted to move from Dilovası because I was sure his illness was related to air pollution. But my mother did not want to leave here because she wanted to be close to her friends and relatives. So, we stayed. But, I don't regret it. If I went, I would be back by now. Here, the traditions and customs fit our way of life (Hakkı, M, 45).

Unlike other respondents who do not believe that Dilovası is contaminated, these people, instead of denying that they live in a toxic place, further underline that they enjoy living in Dilovası. The toxic contradiction comes from contradictory interpretations of environmental pollution. Here are positive comments about the strong community values provided by individuals who see Dilovası as the best place to live. However, they admit that environmental pollution impacts their health status negatively. In a similar vein, Burningham and Thrush (2003) argue that people feel close to their communities because of the strong community relations and the resident's perception of their community rather than outsiders' stigmatized words.

Most importantly, close social networks motivate many to stay in Dilovası (Edelstein, 2003; Luginaah et al., 2002; Singer, 2011). The meaning of home, even it is labeled as cancer valley, does not immediately mean that people will move or fight against harmful industries (Atari et al., 2011; Neumaan, 2016). In that respect, Ragıp explains the role of community relations in Dilovası for his decision not to move somewhere else as follows:

> Here everyone cares for each other. For instance, if someone dies, everyone attends funerals even if they do not know the person. Here everyone supports each other either good or bad days. These are essential aspects and cannot easily be found everywhere. That's why people cannot easily move from Dilovası even if we have severe environmental pollution problems (Ragıp, M, 37).

Similarly, Mehtap, who describe Dilovası as one of the best places to live in Turkey, said:

> We love our neighbors here; everyone knows everyone. Everyone comes together both in bad and good times. In sickness, a funeral, and a wedding. Even if you have a cold, the whole neighborhood comes and checks on you. That's why I love it here and do not want to move. When I go out and come back here, I feel happy to go back to Dilovası. When I walk around, I am greeted by everyone's smiles. You can't find such a place anywhere anymore. For instance, my brother's father-in-law died in Ankara, and no one showed up at the funeral. If that funeral were here, everyone would go there in Dilovası. I am not sure. Here, everyone takes care of each other even though we are all mixed is getting along well (Mehtap, F, 48).

Mehtap paused for a while and said she might want to move one day, but it was not an option because they were living in a family apartment. Clearly, close and meaningful community relations that residents established may explain why many still live in Dilovası. Nevertheless, socio-economic difficulties also affect decisions related to moving, as Mehtap referred. When I asked her why she did not sell her house and go somewhere, she explained that the frequent media portrayal of Dilovası as a filthy and dangerous area that causes cancer depressed the value of their home and made it difficult for the entire family to move. Due to changes in property prices, most people now live in Dilovası say that they can't even move out from Dilovası because they

can’t profit when they try to sell and buy a new house from somewhere else. As Checker’s (2007) study shows, contamination news that negatively impacts the property values might be one of several reasons why communities do not move. Many people regret that they had not made the same investment elsewhere. To sell a house is almost impossible for a good price like Halil mentions:

> After that cancer valley news, property prices have dropped. Even foreigners know this place as cancer valley. Since Dilovası is known as cancer valley, nobody wants to move or work here because of the news. Almost all teachers and state officers here prefer not to live in Dilovası (Halil, M, 40).

As he further notes, the Syrian people rent most apartments because of cheaper rents. Given their landlord position, while some participants did not consider moving or renting a new flat, others who live on rent also commented that it is difficult to find cheaper housing than Dilovası. Still, this devaluation of property continues to be a significant problem in some people who want to live in a better environment but cannot do so. In addition to the difficulty in making a profit, Halil further points out that because he owns his own business, it is difficult for them to move:

> As long as our business is here, our future is here. We wish we could live better, but we don’t have many choices. My property is here. I can’t sell it either because I cannot make a profit (Halil, M, 40).

Environmental stigmatization has been resulted a vital demographic change in Dilovası. Prior studies have also noted the significant change of the region’s demographic profile after an industrial facility sited (Huebner, 1998). In a similar way to other contaminated communities, Dilovası became a place where people with money had already moved, those who could not afford to move stayed, and further Dilovası attracted low-income earners because of decreased land values (Taylor, 2014). Consistent with the literature, this research also found that participants who believe that their health deteriorated by pollution cannot easily move because of economic difficulties and the reason that their homes lost value in time because of environmental risk (Checker 2005; Lerner, 2005; Taylor 2014). During my fieldwork, I learned that most locals have their own homes or pay very little rent. Many bought

land in the past and built their apartments. Now, their children and grandchildren live in those apartments. Although the fear of getting sick is the main reason people want to move, moving is not a reliable option. One of my respondents shared how difficult it would be for him to go somewhere after he spent all his money to build his home:

> Of course, the pollution and health problems in Dilovası frighten us. There are many asthma patients around us. We all know that we live in a cancer valley, but most people live out of necessity. There is nothing we can do. We cannot afford to go on our way. Whatever I have, I have already spent and invested here. Now I can neither buy a house nor go to a new place with my retirement pension. There is nothing to do. We will continue to live like this (Necati, M, 76).

Continue to live out of necessity and to admit that they have already invested what they have in their house; many individuals experience what Dorota Taylor (2014) refers to as being "trapped in their contaminated homes" (p. 101).

Nonetheless, even though some family members moved from Dilovası for health reasons, some members continue to stay because they can't afford otherwise. Necati further explains that:

> My wife got sick. After being diagnosed with breast cancer, my daughter bought a home from Bayramoğlu, cleaner than here. My daughter and wife have moved, but my son's family and I have to stay here. We are staying here because now we have to pay our house debt (Necati, M, 76).

Figure 10. Necati while reading me the list of people who died of cancer around him. Photo by the author

When I asked to take a picture of that list, he was hesitant to allow me to do so. Then he said, in a calm tone:

> I don't think you should. Everyone knows what is happening here. You may get in trouble. There is nothing they cannot do (Necati, M, 76).

It is important to note that the reasons for participants who continue living in Dilovası are too complex to be elucidated with explaining only with economic investments. As pointed out in the above section, close community relations and cultural values positively impact people's decision to live in Dilovası. However, as the below quotation indicates, the resident's current socio-economic condition and future projections, such as fears of being unemployed, also help us to explain why they are unable to move easily:

> Everyone here coughs when they wake up in the morning. Most people want to leave here, but it is not easy. My husband has been working in a factory for eleven years. After many years of hard effort and the chance to retire, it is not easy to leave that job. We are not even sure that he can find another job if he quits (Esra, F, 53).

In this sense, although health risks and fear of getting sick one day are among the main reasons people want to move, moving is not an easy choice for everyone. Another woman shares to me that they can't leave both because of her husband's jobs and low rents in the region:

> My husband works in the coal processing site out of necessity. He can't leave his job until he gets his compensation. We all know that coal factories poison both them and us. We cannot also move from Dilovası because our relatives are here. And we pay 650 TL for rent. It is the cheapest one. The same houses cost 1300 TL in Gebze. It is hard to make a living when you live on minimum wage (Halime, F, 31).

All in all, not only does stigmatization cause people to be mentioned as dirty and unsafe since they live in Dilovası, and the value of their houses depreciates (Checker, 2007), but it also has shaped the future of those who cannot afford to move because of their socio-economic background. Similar to Halime's comment, Emrah also shares that moving is not an option for those who live on minimum wages:

> The only ones left here are the workers and those who have to live on minimum wages. My rent is 700 TL. The houses smaller than mine are around 1500 TL in Gebze. To move from Dilovası is not an option for us. My rent should not be half of my income. For those who live on a meager income, this place is compulsory. Many people here come from Eastern parts of Turkey; they migrated here to find work. They can't either go back as there are no jobs available there. So, we have to live in this place (Emrah, M, 46).

In addition to the depreciation of house values, the danger of stigmatizing Dilovası is that it shapes residents' social relationships, employment chances, and psychology (Link and Phelan, 2001). For instance, Celal commented on how other's views of Dilovası and himself affect his business:

> We love living here, but people are biased towards me because I live in Dilovası. For instance, I produce rainbow budgies and sell them online. But every time I told my customers that I lived in Dilovası, the conversation ended immediately. I now say to my customers that I am from Gebze. Gebze is just a 10-minute driving distance, but their attitude towards me changes significantly. For instance, there was a wedding ceremony here recently. When the groom arrived to take the bride from Dilovası, they said, "Oh, we were happy to arrive home safely. Luckily, it all went off without a hitch". Maybe there were some

> safety issues in the past, but I do not understand why people are still afraid of coming to Dilovası. It is safe now (Celal, M, 41).

The above quotations corroborate the earlier findings (Bush et al., 2001; Colocousis, 2012) that show interlinked relations of environmental stigma impact on person and place identity. Also, this quotation broadly supports the work of other studies in the environmental stigmatization area linking stigmatization with people, place, food, animals, and even products (Edelstein, 2003). Hence, the lives of residents of Dilovası can also be read through a lens of stigmatization of people, food, and animals, not just the place. Erdal, who started working in one of the upper Organized Industrial Zones, said, "I offered the fruit to my colleagues at work, but they refused to eat since I brought them from Dilovası" (M, 35). Once again, every time journalists and scholars publish an article or write about the cancer valley, this not only warns the public about the dangers of industrial pollutants but also may pose stigma risks that impact the daily lives and even psychological health of Dilovası residents (Kelaher et al., 2010; Link and Phelan, 2001). In her paper, Pamela Neumann (2016) asks scholars to pay more attention to how communities make sense of stigmatization and their responses to it in many ways. In this regard, toxic contradiction might be residents' response to outsiders who wished to be known by local and strong community values.

5.3.2 Moving Farther Away to Avoid Harmful Effect of Pollution

As this part of the thesis show, many residents also prefer to move as they believe that living in Dilovası negatively impacts their health. For the residents of Dilovası, other districts such as Darıca and Bayramoğlu and even neighboring Tavşancıl took on particular significance, as those places believed to have cleaner air than Dilovası. Depending on one's income, health, and the location of family members' jobs, some people I met prefer to move to those places. In one of my visits to the area, I met a man who moved to Gebze after his wife was diagnosed with cancer. Even he believes that there is no significant distance between Gebze and Dilovası, he accepts to move for the sake of his wife's health. Burak says that:

> I don't think there is much difference between Gebze and Dilovası in terms of environmental quality. But the doctors said she got sick because the dust here damaged her lungs. I am still feeling okay since I lived here for so long, but she got sick because she wasn't used to it. Anyhow, I continue to come to Dilovası every day; it doesn't affect me since I was raised here, I think (Burak, M, 33).

Defining not being affected by environmental contamination by being accustomed to living with it supports evidence from other researchers' observations (Bush et al., 2001; Jovanović, 2018). Importantly, as it turned out, residents believe that the Tavşancıl neighborhood, which is far from the Dilovası Organized Industrial Zones and coal processing site but close to the cement industry, is less polluted compared to other areas in Dilovası. Similarly, Bush et al. (2001) and Skouloudis et al. (2017) study found that environmental stigma was more prevalent in neighborhoods nearest to harmful industries. I have also met people who support this argument too. For instance, some residents preferred to move to Tavşancıl after their family members got sick. A man whose wife got diagnosed with cancer explained to me that his family's health status, health expenses, and cleaning routines had all improved after they moved to Tavşancıl:

> While we were living in the Orhangazi neighborhood, my wife was cleaning the home every day. And also our child was sick all the time. Now, we moved to the Tavşancıl neighborhood to get fresh air. Tavşancıl is far from the polluting industries and undoubtedly positively impacts our children's health and cleaning routines. We go to the pharmacy less often and clean the house less often. But now my rent is around one thousand TL. It is more expensive than other neighborhoods because the air here is cleaner (Hikmet, M, 36).

As he underlines, he pays more than before to get fresher air even if many residents still believe that everywhere is surrounded by industry in Dilovası. Here, the environmental stigma plays a vital role in the differences among the environmental quality of neighborhoods. Locals' assumption that neighborhoods far away will be less likely to be affected by pollution is shared by other studies (Bush et al., 2001). Consistent with their assumption, almost all respondents perceived the location of the neighborhoods as one of the prominent factors for experiencing pollution. As a result, many residents attempt to reduce polluting industries' impact by moving to a far

located Tavşancıl neighborhood. Yet, the high rents of Tavşancıl neighborhood might only be a choice to those who can afford:

> Those senior executives of industry and politicians who must stay in Dilovası because of their jobs prefer Tavşancıl for living. I think it's because Tavşancıl neighborhood has a more green area and cleaner air than other neighborhoods. That's why rents are expensive here (Cansu, F, 25).

Consistent with the above quotation, the residents in Tavşancıl were more likely to express how less polluted their neighborhood was than other parts of Dilovası. Further, they indicate more green areas and social facilities for children and youth to enjoy. More importantly, since Tavşancıl is far from Dilovası OIZ and the coal processing site, it was a positive sign of air quality. Accordingly, many residents who do not live in the Tavşancıl neighborhood believed that being far from the most polluting industries such as Dilovası OIZ and coal processing sites associated with fewer health problems. The link between health concerns and proximity to facilities is in accord with the findings of other studies (Atari et al., 2011). However, it is essential to underline, for a few participants, the Tavşancıl neighborhood cannot be free from pollution problems because it is also close to the Noah Cement factory. Although proximity to odors and chemicals is likely to be expected with dissatisfaction within the community, the neighborhood's location still does not seem to be a significant factor considering moving away from Dilovası. Here, having the financial means to move from one area to another plays a more substantial role. As I explained, moving away is more associated with one's socioeconomic resources than the perception of environmental risk concerns. Nonetheless, choosing not to move from Dilovası might also be connected to the assumption among the respondents that nowhere is free from industries and environmental pollution issues.

5.4 The Complicated Promises of Relocation

Many people I talked to mentioned that the coal processing site area would be relocated soon as nobody agreed to live with coal dust. Since 2012, residents have continued to stand against coal processing sites. Built near Kayapınar and Turgut Özal

neighborhoods, coal dust makes residents' lives harder. As a result, many individuals near the coal processing site complain about coal dust found everywhere, even on their clothes, balconies, and lungs. Residents have been protesting the area ever since it moved there; politicians promise locals that the coal processing site will be relocated soon. In fact, I also learned that relocation is not limited to the coal processing site for the residents of Dilovası. During my fieldwork, I understood that relocation is part of living in Dilovası (Auyero and Swistun, 2009a). After those several broken promises, most of my respondents do not believe that relocation will happen in the near future. To underline the rumors about relocation that have been going on for years, Seda shares that:

> I've been living here for 35 years. There are always rumors about relocation, but nothing happens. Sometimes we hear that all Dilovası will be relocated, and sometimes we hear that they would relocate some parts of Dilovası. Back then, they were also rumors about the relocation of factories. Nowadays, they say the neighborhoods, the ones close to industries relocated to the TOKİ houses that will be built in the Tavşancıl area (Seda, F, 58).

Uncertainty over the relocation and an interminable wait for authorities to provide definite dates have also been noted in other studies (Auyero and Swistun, 2009b). Auyero and Swistun's (2009b) theme of waiting shows us that circulating contradictory options influence Flammable residents' present and future plans. Most importantly, it puts them in a situation where they rely on others' decisions. Similarly, many residents I talked to agreed that for relocation to happen, industry and government work together because it is inevitable that it will be a huge expenditure for both sides. When uncertainty about relocation and residents' lack of resources to relocate on their own are taken together, fatalism appears to be likely experienced (Tilt, 2013). When I asked about whom did you hear about the possibility of relocation, Aysu, who is convinced in time that no one will go anywhere, explained:

> It is merely hearsay. Ten years ago, they said this neighborhood would be relocated in six months. Everything sounded certain about relocation at that time. I was changing the windows, and everyone was telling me not to spend money on them (Aysu, F, 50).

Today, she does not pay attention to any of the news about relocation anymore because she says that she can see with her own eyes that the coal processing site is, in fact, still growing, although it was supposed to be relocated years ago. This situation reminds her of a fairy tale. Aysu continues as follows:

> They are now doing Toki houses and say that they will relocate us there. They can't relocate everyone. There is not enough room in the Tavşancıl neighborhood for all of the residents of Dilovası. The state and industrialists should come together and decide what will happen to us. If they are going to relocate us, they have to give the exact relocation date to make our plans accordingly (Aysu, F, 50).

Figure 11.Coal processing site view from Kayapınar neighborhood. Photo by the author

And yet, waiting for those in charge to decide on their future left the locals with perplexing information on relocation, which matches observations from earlier studies (Auyero and Swistun, 2008, 2009a, 2009b). With a few exceptions, almost all residents emphasized that the uncertainty related to relocation and lack of an official announcement on television led many to stop believing politicians and the state's power. Respondents further explained that even the coal processing site, which has been said to be relocated as soon as possible, demonstrates the state's failure to subdue industrialist power. Still, many also believed that the coal processing site will likely

be relocated in the near 2023 elections to increase the ruling party's vote. Regarding how difficult it is for an industry to relocate once established, Esin told me that:

> "For coal processing site, it might take years for a return on investment. So they are right too if they don't want to go (F, 33).

Esin's comment captures the relocation of both residential areas and coal processing site met in one aspect: both parts, residents and factory owners, seemed they would agree to relocate if they were satisfied with the offer.

Figure 12. Entrance to Fatih neighborhood. Photo by the author

I also had difficulties visiting the Fatih neighborhood because no public buses were going there. Instead, if you do not have a car, you have to cross the highway on foot, which is really risky. I talked with several women who said that they went to the market on Thursdays only, the day the public bus runs once a week. Likewise, another woman, Sevgi, believes that the fact that TOKİ houses are being built is also related to moving out people on purpose:

> They will deport people. They are making Toki everywhere to relocate us. They do not give title deeds to people who have homes in foresty land and 2B. They want us to give up and move out from Dilovası. They don't want

> people to live here. They don't repair our decrepit roads or change traffic lights. Even there are no proper crosswalk markings in the center of Dilovası (F, 48).

For many residents of Fatih neighborhood, living next to chemical complexes and toxic tanks while not even having the chance to wander around easily because of the highways surrounding the area is not a matter of choice- for most residents, this is all they can afford. Even though it seems possible that many Fatih residents will likely want to move to Toki houses, most of the people I spoke to told me that they would prefer to stay. Most told me that since they have large families, Toki flats won't be big enough for them. For some, they would rather stay in Fatih, saying that they have more greenery here. I also noticed that almost everyone lived in a self-built one storey home surrounded by a private garden. Whereas Toki settlements will be high-rise apartments with small flats and most locals fear that they would end up paying some kind of mortgage.

The new Toki houses planned to be built in the Tavşancıl neighborhood are interpreted among my respondents differently. As many stated, however, the relocation to Toki houses should be on a voluntary basis. Respondents' concerns about possible relocation seemed to be more related to investment losses that may occur. Specifically, while a few say to agree to move to new homes, many of my participants insist that they will stay and resist if the state forces them to move because TOKİ apartments do not have the same quality and opportunities as their current homes. For those, Toki means small flat and new debt. For Aysu, who believes Toki is a big lie, said,

> No, I don't want to move Toki houses. Others may wish to it, but I don't. TOKİ houses are tiny. If we go there, we also need to pay for those houses. Toki puts people in debt. We will be both relocated and in debt. I am almost 50 years old. I do not want to pay a debt after this age. I have a four-bedroom house here. I want three flats at least in Toki, in return for my home. Why should I waste my years of work? I would never go if they offered to give me just one flat. I don't want those cheap Toki flats, and everyone knows that they are low-quality (Aysu, F, 50).

The establishment of TOKİ houses in the Tavşancıl neighborhood by the government, on the other level, caused my residents to worry that they would lose their homes for

a low price. Therefore, according to many participants, dealing with industrialists about the land is far more cost-effective and necessary if one does not want to move TOKİ houses. Güler summarizes that aspect very clearly:

> There is a big difference between selling our homes to industry and accepting Toki houses. It is for sure that the municipality will also ask for money for those Toki houses. But if we sell it to the industry, we will receive a lump sum of money. Then we can go wherever we want (Güler, F, 38).

Frankly, in contrast to other polluted places where there is only one polluting company (Lerner, 2005; Taylor, 2014), there may be difficulty in reaching an agreement between industry and the public in Dilovası concerning buyout because there are dozens of polluting companies in Dilovası.

Homeownership, the lack of title deeds resulting from homes built past in 2B, and forestry land also matter why many individuals cannot move easily. I met many people still paying to have a title deed or waiting for another zoning amnesty to have the legal right to their property. The high percentage of residents who do not have title deeds, also known by industrialists, is believed to be the result of why industries lack involvement in an agreement between community members. As an excepted outcome, many residents also believe that industrialists are to blame for their inability to get title deeds.

Surely, relocation will be costly either for industrialists and the state or both. In recent years, however, industrialists buy individually from some neighborhoods. This was also viewed differently among my respondents. The next chapter aims to examine what the residents think about relocation and buyout's impact on their lives and the environment of Dilovası.

5.5 Is relocation likely to cause further environmental degradation problems?

As I was told, some of the neighborhoods had been relocated years ago, and recently industrialists have also bought the houses of the Yıldız neighborhood. However, as almost every participant agreed, environmental pollution problems remain and even worsen because relocation is not a choice. Because the industry continues to expand in the neighborhoods that have moved over the years. Furthermore, many respondents stressed the inevitable consequence of the relocation of some areas and industrial growth, which in the end, forces people to move because no space will be left for settlements:

> I do not understand the idea of relocating only some neighborhoods because no place is free from toxics here. If you only relocate the houses right next to the industry, the factories will expand and soon will reach the residential area again. This time, we will have inhale dust and smoke again. When they move the residents, they don't turn the land into a green area; or a forest. They relocate people and give them to industrialists. The industry is expanding even more. It will cause us to be surrounded by more factories than ever. By doing that, they want us to leave by ourselves. It is kind of a strategy of moving us out. Even now, we are in the middle of roads and industry. They want us to move because they want to provide more land to industrialists to pollute more (Focus Group 2).

Their worry that industrialists may seek to expand their land when some people decide to move away is consistent with that of Luginaah et al.'s (2010) study, which highlighted the contradictory relocation views among the Aamjiwnaang First Nation community in Ontario. Many respondents also underline that relocating the residential areas to the Tavşancıl area would not solve the environmental problems. The irony here is that for Ragıp, every neighborhood is more or less equally affected by the pollution:

> They now say they plan to relocate some neighborhoods to the Tavşancıl neighborhood. But there is no difference between here and there. All districts here are close to each other. Tavşancıl is not that far away either. Air pollution also affects it. It is 2 minutes by car. Anyway, Nuh Cement and coal processing site has already affected the Tavşancıl neighborhood. Everywhere here belongs to industrialists; there is no space left for people to live (Ragıp, M, 37).

Although many talked about the industrialist's attempt to establish more industries in Dilovası by relocating people to TOKİ apartments or forcing them to leave on their own way by lack of investments, some people have no choice but to stay. Necati is one of them, and in a very disapproving manner, he says:

> I worked here for 40 years. I worked in those ashes and slags. I spent all my money here. I made my own home. Now we are also struggling with cancer in the family. Now they also want us to go. Where can I go? (Necati, M, 76).

Altogether, contradictory views about relocation are salient in Dilovası. The start of Toki construction and the rumors about the relocation of neighborhoods and sometimes even whole Dilovası shapes the expectation about Dilovası's future. The diverse opinions of residents in contaminated communities also share a similar pattern with other studies (Luginaah, Smith & Lockridge, 2010; Shriver and Kennedy, 2005). Whereas some people prefer to move Toki houses or wait to buy out from industrialists to move wherever they want, some who do not believe that industries have no impact on the health and well-being of the community prefer to stay. This situation is part of a broader issue, including one's perception of risk, community values, economic pros and cons depending on individuals' current situation. Economic factors, age, retirement factors, property values, community relations, and uncertainty about health effects and environmental risks were also noted by Shriver and Kennedy (2005). They found that many factors play a role in Picher residents' decision to stay in their contaminated communities. However, it should also be noted that there are no efforts by residents of Dilovası about relocation, unlike Shriver and Kennedy's study (2005). Indeed, in Dilovası, many residents mostly believe it is just another unfulfilled promise by state officials. As Güler underlined, "It is just another rumor; we do not know what to believe anymore" (F, 38).

On the whole, the people I talked to mentioned that they would move if an acceptable compromise could be reached; otherwise, they would resist staying. While some residents criticize the relocation plan with concern that it will further increase industrial development and exacerbate environmental degradation problems, others go

against that criticism on the assumption that it will further increase city investment and offers better living conditions. Even so, the construction of Toki apartments where few people could move would not seem enough to address the direct impact of socio-economic inequality on the environmental decline. In other words, the possible relocation in Dilovası does not reflect how and why the wider community members are affected by those socio-economic inequalities.

The new Toki apartments are also critical for future research because there are still many unanswered questions, such as who will move there? Nonetheless, the vital question is whether individuals who prefer to move voluntarily or as a part of a relocation plan to avoid pollution will be able to do so. Some of the questions that I ask emerging from the new Toki settlement relate specifically to Lerner's (2005) study, which gives place to Beverly Wright's dialogue with one of the Norco residents. It is important to remember her dialogue. In sum, Beverly Wright believed that what was going on in Norco, all those new houses which were promoted as safe and clean that attracted many new homeowners to the area did not imply that in following years, those same people who came with hopes and dreams will demand relocation to escape from Shell company (Lerner, 2005). This appears to be the case for Dilovası as well in the future.

5.6 Being surrounded by the industry yet unable to work

Dilovası has always been thought of as a place where you can easily find jobs. This was also one of my first assumptions of the work profile of Dilovası. Although first generations were able to find work to support themselves and their families, and many continued to move here to find a job, there is also a high number of individuals who complain about fewer work opportunities. As Mehtap states, locals are aware that factories continue to employ people, but not from Dilovası anymore, so the reason is not economic:

> Our first generations, those who first arrived in Dilovası, worked here. But now, almost all of them are retired. They do not hire local people anymore. We see all those workers coming with bus services. There is always around 20-30 worker service coming from İstanbul, Derince, Gebze, İzmit, and Yalova. We suffer from the dirt and smell all the time, but no one works in those factories (Mehtap, F, 48).

Talking about this issue, Fatih, who believes that employing locals is more beneficial to the employer, said:

> Employing local labor also benefits the industrialist as they save money from transportation expenses. Nonetheless, traffic congestion and air pollution were made regarding their employment decision. All those living here come from the Central Anatolian regions to find work. Because the industrialist does not prefer to hire locals, those people again go to other towns to work. For me, it is so strange that while many people come here to work from İstanbul, Yalova, and İzmit, the people of Dilovası also go to those regions to work (Fatih, M, 49).

This finding contradicts previous studies, which have suggested that high unemployment in degraded environments is related to the treadmill of production logic, which contends that increased production and investment in newer technologies result in less employment (Bell and York, 2010). Dilovası's current employment profile is contentious since many industries continue to employ many people outside of the Dilovası. Therefore, the stigmatization of the region, which is discussed in the earlier chapters, might significantly impact the employment chances of locals rather than the treadmill of production theory. Discriminatory views about Dilovası, the spatial stigma may lead inhabitants to be viewed as dangerous and distrustful. Thereby, employers tend to be more inclined to employ people not living in Dilovası. Because locals do not have a chance to talk with employers about their employment choices, many of my participants disagree about the reasons why factories do not hire local people. In the case of unemployment, many residents expressed stigmatization of Dilovası people as non-trustable and "dirty" as an immediate reason for their employment dilemma. In line with the literature, many residents also believe that the stigmatization process dramatically impacts employment chances (Keene and Padilla, 2010; Link and Phelan, 2001). For instance, many interviewees argued that employers

do not want to hire people living in Dilovası because they do not trust them related to past events such as stealing, high substance abuse, and crime rates. As Erdal put it:

> Frankly, they don't employ people from Dilovası, but it might be related to us somehow. Almost 30 or 40 years ago, people even used to steal iron left by the industrialist to build their own houses. The locals here stole many materials from the industrialist (M, 35).

For Erdal, the mistakes that elderly individuals made in the past should not be paid by younger generations who are educated and potential skilled workers. Nevertheless, many young respondents mentioned how hard to find a job in the companies when they say, "I am from Dilovası." For instance, Ömer alluded to the notion of stigma:

> After graduating from technical high school, I started to look for jobs here. But whenever I say I come from Dilovası, employers tell me that they do not hire people from Dilovası. They do not explain why they don't hire people from here. I think it is because of the stigma associated with high drug use and crime in the past. I still see people using drugs and drinking alcohol in parks at night (M, 24).

Not hiring young educated local people is similar to the claims of Lerner (2005), who argue that black residents of the Diamond neighborhood were only employed beginning of the industrial period to work in manual works but were not employed by the Shell company over time. Similar to the experiences of Dilovası residents, black individuals of Diamond also found a job in other industries farther away, not in Shell, which polluted their neighborhoods.

Perhaps, the most striking finding is that my interviewees believed that the high unemployment could be explained by the fact that industrialists want the locals to remain in their socio-economic positions. By doing so, as they express clearly, locals will have to learn to live with pollution as no other choices would be available to them. The comment below by Haydar illustrates this aspect:

> The unemployment problem here reminds me of Maslow's need. In a region, the level of income and the level of consciousness need to be parallel. Once people are economically secure, they need to satisfy their social needs. I think social needs are essential to criticize and think beyond physiological

> conditions. Here, they want us to think nothing else than our physiological needs. No one wants to hear the voices of people here, their needs, and their concerns. No one needs to hear of us; they do not need troublemakers (Haydar, M, 39).

Furthermore, Ragıp commented:

> They do it on purpose. If people living here start to earn good salaries, they want to live in better environmental conditions. They will be speaking out about the problems in here more. So, they do not want this. They do not want to give us economic power because they are afraid of what we can do (Ragıp, M, 37).

It became clear from an interview with both Haydar and Ragıp that, and from my field notes, many residents acknowledge that by keeping locals at low economic levels, industrialists unempowered the locals economically and embarked on them the path of least resistance (Bullard, 2005). For instance, illegal toxic waste dumping is a real problem in Dilovası as well as other contaminated communities (Armiero and Fava, 2016; Auyero and Swistsun, 2008). Many people I talked to always mentioned places where industrialists dumped their waste, although many more have been forgotten in years. Ali, one of its witnesses, attributed this problem to the economic disempowerment of the people by stating that "Industrialists know that if Dilovası people well paid off, they will speak out against illegal dumpings" (Ali, M, 68).

Indeed, not all residents I talked to were sharing the same ideas. Many also were less convinced of the industrialist intentional employment choices. Among my interviews, some of them gave the right to industrialists. According to them, it is mainly related to low education and lack of qualified workers profile of the region. For instance, Faruk underlined that:

> I think here the problem is the lack of qualified workers. I do not believe that the employers would also be alright to spend lots of money on services. Nonetheless, traffic congestion also affects workers' performance. All those workers feel exhausted even before starting their shifts (Faruk, M, 60).

Similarly, Cansu provided an example of people's lack of work ethic that may play a role, illustrating the strong community relations also:

> The industrialists here say that when they employ the people of Dilovası, they take time off regularly. Indeed, the industrialist says it is hard to keep track of absences because of locals' close networks in hospitals and municipalities. Dilovası locals can easily get sick notes from their friends (Cansu, F, 25).

Most, but not all, residents reveal that they were fed up by the industries that do not hire them but continue to pollute their environment. Most crucially, for residents, both state and industrialist were not seeking ways to improve the unemployment issue in Dilovası. Ayşe uncovered many others' opinions about unemployment and the unacceptable excuses of industries for not hiring people from Dilovası. She contends, like others, industrialists do not want people to earn money because they are afraid of locals to demand to live in a good environment, a healthy environment:

> They do not want to hire local people. They do not like us; they exclude us because we are not educated. But we are the people who live in this toxic place where the factories themselves are polluted, so we should be able to work for them. I think they do not want us to earn money either (Ayşe, F, 29).

I may argue that living in Dilovası and all those nearby factories and industrial zones are considered by almost all respondents as the primary employment and source of income for the locals. Therefore, the focal point of the comments has been on all those industries' financial contributions to the local and national economy. Aydan provides more detail about this issue:

> When we think of industry, the first place that comes to mind is Dilovası. Job opportunities are high here. But locals cannot benefit from it. From the beginning, I want to say that industry has benefits, but here we are not benefiting. After all, we are both broke and breathing polluted, dirty air (Aydan, F, 45).

As mentioned earlier, employing people from distant areas but not providing jobs to nearby locals is consistent with that of Lerner's article (2005). Lerner further discusses that people hold different views based on their race about Shell's oil refinery and chemical plant impact on the community. Lerner underlines that while the white individuals of Norco residents employed by Shell report no health and pollution problems, the minority of Black Norco residents who cannot find work in Shell oppose the polluting operations and demand relocation. As Lerner put it, white residents claim

that Shell refused to hire them because they did not receive proper training. On the opposite, black individuals of Diamond believe that Shell should give training to locals first. This outcome was also one of the same arguments I heard while discussing what can be done to provide jobs to locals in Dilovası. Almost all my respondents agree that similar to black residents' claims. Since they are the ones who are suffering from pollution, it should be their right to work in those industries (Lerner, 2005). And, if the companies justify themselves with the argument that locals are not trained enough, according to both Dilovası residents and black individuals of Diamond residents, factories should offer the training for locals and educate the people in the manner desired by the companies (Lerner, 2005).

All in all, a common view amongst interviewees saw the industry as a work opportunity. Considering living next to industrial facilities and the possible risk, residents seem to be arguing that it is their right to work near factories. These views surfaced mainly in relation to the benefits of the industry. When I asked what they mean by benefits, they mostly told me to have a regular and high-paying job in nearby industries. But here, the problem is that locals do not feel the benefits outweigh the negatives in the present. For instance, when I asked how they relate health, environmental risks, and job opportunities together and what they want from the industry, Hatice, who has lived in Dilovası for more than twenty years, gave the following answer:

> The industry here needs to take care of the locals. If we are the ones who suffer from air pollution, we should be the ones who work in those factories. For instance, if they need a manager, a person from Dilovası should work, not someone coming from İstanbul. Our children are now well educated. They are not like us. One day, I hope that my children can work near us in those factories (Hatice, F, 43).

Furthermore, Celal expressed a desire for an environmental tradeoff:

> There are many advantages of industrialization. Here the biggest problem is that we are not able to get benefits. Those industries pollute us; they are just next to us. We always breathe their dust, but we can't work inside those

> factories. If we are the ones affected, we should also be the ones who work there (M, 41).

When I asked what they think about living close to the industry and its health effects, one of my respondents explicitly referred to industries' benefits and risk acceptance in exchange for jobs. Faruk stated that:

> There are differences in terms of life quality between living in Ağrı and Dilovası. But as folk says, nothing comes without a price. There are both advantages and disadvantages of industry (M, 60).

The high number of residents in Dilovası who wish to benefit from industry corroborates the other studies defining residents' claim to benefit from the industry due to economic insecurity and poverty in contaminated communities (Bruno and Jepson, 2018). Beneficial contributions might be significant to affected communities by bringing back what has been lost due to industrial pollution. Hence, it could be argued many residents are aware of pollution problems, but in exchange for jobs, they don't see them as a problem. Most importantly, it can be concluded that pollution is not the primary concern of the respondents. In accordance with that, Aysu, whose son works in a nearby factory, emphasized that:

> Industrial development is a must for Turkey. They employ many people. What can you do in Dilovası if there are no factories here? If you live here, you also need to work here. What can you do except work for the industry? I am a housewife; I have no income. You need jobs to earn money. I am happy that my son works near our home. We are lucky that he found a job (Aysu, F, 50).

Not coincidentally, the socio-economic difficulties that many residents face have guided their focus on the positive sides of industries. This directly positioned residents to search for jobs. Commenting on the number of industrial facilities in the area, Esin said:

> As a woman, I also want employment in those factories. I want to contribute to my family's finances. As we live close to factories, sometimes we work for them from home. For instance, we folded masked and gloves at home in Covid time. We earned a lot; it was nice to do that (Esin, F, 33).

Over the years, the unemployment problem has persisted despite a growth in the number of industries, representing those residents who have linked themselves with ready to take environmental risks to find work. There was a sense of acceptance of risk living close to industries amongst interviewees. To give an example, İzzet noted a huge area packed with many factories in Dilovası:

> Above Dilovası, there are four other organized industrial zones. Chemicals, marbles, and İmes cover an area of 17 thousand acres in total. The coal industry covers 900 acres. Dilovası Organized Industrial Zones also covers 7-8 thousand acres. Wherever you look here, you will see factories. No one should be unemployed in Dilovası, women or men, no one. But still, many people are unemployed despite those factories. They poison us. Of course, we will inhale the poison as well. This is our livelihood. There is no escape from it. If there were no industry here at the beginning, our ancestors would not have come either (İzzet, M, 32).

As it is clear, residents' dependence on those industrial jobs for economic well-being puts them in a situation where they have to make a choice between their health, environment, and employment. Many respondents highlighted the importance of having a job and being willing to endure the potential health risks that it may entail. However, many people continue to suffer from unemployment because living nearby to industry does not guarantee locals a job. In that sense, the economic independence to industrial facilities in Dilovası does not mirror those of the previous studies that have examined the community's bargain between economic dependence on nearby polluting facilities and environmental protection (Gould, 1991; Ward, 2013). Still, residents of Dilovası are subject to environmental job blackmail which one day believed to benefit them (Gould, 1991). Commenting on this dilemma, Sevcan, whose son was able to find work after they waited years, said, "Those factories you see both provide jobs and make us sick. I think it is the summary of Dilovası (F, 64). Another response focuses on the issue by stating that the advantages of industry outweigh the disadvantages. He said that:

> There will always be many disadvantages living close to industries. We know that, and we would not complain about that much if we were able to work. We

> know that they pollute Dilovası. If we could work in those factories and benefit from them, it would be different (Ahmet, M, 53).

Ahmet further commented that the long unemployment problem is the reason why he is now opposed to industrial activities. To give another example, one of my respondents also told me that he is now against polluting activities and immediately complains to factories when he sees a pollution problem. Hikmet further says that:

> If those factories would provide employment, we would not probably speak up because we know that living close to factories has disadvantages. We would be ready to suffer disadvantages, but now we only suffer. Unfortunately, we do not see any advantages in living close to the industry. They do not even make donations to our schools and hospitals. They don't do anything to improve the standard of living here. So, I do not want them here. If they cause harm and no benefits to the locals, they need to leave. If they improve our living standards and increase our income, I would not speak out (Hikmet, M, 36).

Unlike the previous studies mentioned how main employers of the contaminated communities pay attention to building strong community ties by donations and funds, it is not the case in Dilovası (Auyero and Switsun, 2008). In contrast, the industrial establishments in Dilovası have not been the primary employers of the population neither in the past nor in the present, and it appears that they prefer not to provide financial aid to the nearby society. Although some industrialists funded local schools, many residents did not find them enough to show the good intentions of factories.

The conflict over the unemployment problem has escalated further by environmental and health risks in Dilovası. Notably, industrial existence can only be tolerated with the contribution to the community. Aydan remarked that industry provides numerous benefits when used properly:

> The new mayor distributed food packets to every house in Dilovası, both needy and wealthy. He did not distinguish one from another. He distributed those packets from the money he received from industrialists. If we are the ones suffering from the pollution here, it is our right to benefit from the advantages as well (F, 45).

The acceptance of a toxic environment and in search of better job opportunities by residents at nearby industries leads to positive views of politicians receiving financial help from industries. İzzet also provided examples of what is meant by good relations:

> Many of the schools were built by an industrialist in Dilovası. If you form good relations with the industry, you will take advantage. Our new mayor is a good example. He takes advantage of those benefits. Recently, 10 thousand tablets were distributed with the support of the industry. The industry has many benefits if you know how to manage good relations (İzzet, M, 32).

All in all, those factories often left residents to decide to allow contamination for the sake of employment or to resist their activities. Environmental and health risks and job opportunities are associated with as a natural outcome of living in Dilovası, where most of my participants focused more on the latter. As Mehmet underlines:

> Employees who work in the iron steel smelting plant take early retirements because of health impacts. We live close to them. We are affected almost as much as they are, but no chance of even working there (Mehmet, M, 50).

Furthermore, Sevgi summarized the local people's acceptance of risks because they believed they were already poisoned by now. She states that:

> People here want to work in factories. They mostly say that I am already poisoned, so it is my right to work and earn money, not others. They wish the industry let them give jobs at least (Sevgi, F, 48).

Indeed, the high emphasis on employment opportunities also shapes locals' thoughts on the environmental movement issue; as I mentioned above, employment and low economic status of local citizens result in less opposition to industrialists' dirty business. Finding stable jobs in factories, at the same time, makes it difficult for people to oppose the polluting industry for fear of losing their jobs. Of course, it is not a prerequisite for mobilization, but it plays a significant role. Like my respondents state that:

> We all depend on those jobs. Many of our relatives and neighborhoods work in those factories—that is why people can't speak up against it because everyone is afraid of losing jobs. People here are turning a blind eye to environmental pollution problems here. Just for the sake of money. You will

> meet many people here who complain about many pollution problems here but cannot speak up or go anywhere else to live because they need those jobs (Focus Group 1).

Unlike the other studies' claims that because of the high-paying jobs in the contaminated community, residents are reluctant to move, in Dilovası, however, the lack of employment for the locals may have played a role in them to continue to live in Dilovası with the hope to find a well-paid job one day (Atari et al., 2011). As those quotations make clear, the people of Dilovası are stuck between the job opportunities that they hope one day benefit themselves and the current industrial risks. It is important to remember here the relation of hope and risk of the polluting industry in the city of Bor brought by (Jovanović, 2018), who has shown how the polluted environment is perceived as a work of hope by the residents. Hope, for many residents of Dilovası, also shapes the understanding of pollution, industry, and employment. It should be no surprise that in Dilovası, many local people are ready to sacrifice living in a cleaner environment even if they work for low wages. Aygün commented on the general problem of the locals as unemployment, and how unemployment affects their lives before pollution issue.

> The biggest problem is inhaling dust. And it is not a significant issue either. We are used to it now. Without the dust, there would be no jobs. We live here out of necessity (F, 32).

The above quotation is matched those observed in Jovanović (2018), Matthews (2010), and Burningham and Trush (2003) studies that showed that obtaining a job possibility in the industry despite its adverse impacts on health meant to community residents stable lives. Accepting pollution in Dilovası and Bor are both actually more intertwined with the current socio-economic situation of the residents, who seek employment in exchange for living with contamination (Jovanović, 2018). However, there is one significant difference. While Jovanovic's study revealed that because the polluting company maintained a good relationship with the town in the past, this led the locals to support the company despite its pollution problems. However, industrial companies in Dilovası did not establish strong community relations with the public.

Nonetheless, factories in Dilovası cannot be considered the region's primary source of income neither in the present nor in the past. This outcome is also contrary to that of Bell and York (2010), who found that the coal industry has a significant role in constructing a community's identity. Dilovası is predominantly populated by migrants or their children and grandchildren from eastern Turkey who once came to the west in search of employment. This may have impacted their economic, political and social view, which might offer an explanation to why some residents see nearby polluting industries in a positive way since they view them as potential employers. Likewise, for instance, Maricarmen Hernandez (2019) discusses how housing instability caused by natural and economic factors in the lives of 50 Casas residents alters the meaning assigned to toxic place and home. The hardships experienced by the residents enhance community bonds to create livable spaces even while it meant to live in risky environments. The primary concern of each contaminated community is never uniform. In this view, whether or not residents of Dilovası have employment hopes from nearby industries can only be better understood if we look at the broader social, political, economic, and cultural aspects that shape the lives of residents' experiences in contaminated environments.

5.7 The Hardship to Claim Environmental Justice in Industrial Growth Politics

Further, I found that my participants have examined industrial growth, development, and employment almost altogether, mainly because their socio-economic position made it difficult for them not to prioritize job opportunities. A family who recently moved to Dilovası after the father got infected with Covid-19 and was fired during the coronavirus pandemic said:

> The industry is essential for economic growth. I hope that industry will grow more and more every year. It is also meant to be more jobs. During this pandemic, many people suffer both from illness and unemployment. The price of everything has increased. I know that pollution problems will continue to increase if the industrial area grows, but precautions must be taken. We need both industry and jobs. We also have a home in Ağrı, but we can't go back because there are no jobs there. The factories here got bigger and bigger even from the first day we came. Hopefully, it will impact future generations, and

> our children will not be unemployed. Industrial growth and economic growth are essential in reducing unemployment (Feyza, 50).

As quoted above, the fear of being unemployed and not being able to support one's family is critical for the interviewer to decide to move Dilovası even though she admits that her husband is even more terrified of being ill, especially after having Covid-19. The promise of employment in risky industries and people's desperation to accept jobs is similar to Adaman, Arsel & Akbulut's (2019) study of a mining disaster, which resulted in more than two hundred people dying in the Soma region. They described the experience of locals around the theme of neoliberal developmentalism's "push and pull factor," both of which compelled Soma residents, who used to be farmers before the mines, to accept risky jobs to provide income to their families (2019, p.517). These two cases from Turkey show us two important aspects of economic development: industrial growth and economic growth, both of which are believed to be interlinked to provide employment to locals.

Although industrial growth was not questioned among my participants, one of the respondents pointed out the chance of degrowth and the massive industrial growth's negative impact on the environment. Hamza introduced the concept of degrowth to promote a sustainable environment but suddenly end it up with its difficult to implement:

> If there could be a chance of degrowth, it might have solved the pollution problem. Since it will not happen, the state should relocate the nearest residential areas (Hamza, M, 47).

Another respondent added:

> The state knows what is happening here. All those metal, iron, paint, and chemical factories produce with permission from the state. They are getting bigger and bigger every day. We as citizens also support their polluting activities because we continue to vote. We support economic growth, industrial growth. But we also live with its disadvantages. My wife was diagnosed with cancer, and I know many people who died of cancer. But industrialists and residents are like each other. We all got our permissions; for instance, I own the property here. I have the right to live here, and they also have the right to produce here. But what they produce is certainly killing us (Necati, M, 76).

The above quotations illustrate both a trend between those who support industrial growth for its economic advantages and those who take industrial growth with possible increased pollution problems. As quoted above, therefore, rather than opposing the industries that pollute their environment and cause many people to suffer from health issues, Necati claims that such a close relationship between industry and economic growth is actually encouraged by their votes to the political parties that always points to growth in all senses.

Similary, Akbulut, Adaman, and Arsel (2014) discuss that state and society relations in Turkey cannot be understood solely via an economic lens but also through a political one. They contribute to our knowledge of how the legitimacy of the state is dependent on the relationship between ensuring economic growth and the promise of modernization at the same time (2014). Given this situation, growth discourse remains the foundation of sustaining the state's hegemony in Turkey (Akbulut 2019). Nevertheless, locals as well stay loyal to the rhetoric on economic growth's importance since their current economic security is believed to be dependent on both economic and industrial development (Avcı, 2015).

An essential aspect of this thesis is that Dilovası residents are also aware of what causes their environmental suffering within broader relations of politics, economy, and history (Broto, 2013). As an illustration, Ayşe further stated that the contamination would have been solved, and Dilovası might have had future possibilities in terms of better living conditions: "If rich people were here, factories would use filters to protect their health. But they don't mind what happens to poor people" (Ayşe, F, 29). Another respondent says that even some polluting factories moved, it is almost impossible to relate it to the protection of human health. Erdal further states that:

> Unilever moved to Konya because their leaks were making roads slippery. There used to be a lot of traffic accidents in TEM. But they didn't move because chemicals were making us ill; they moved for more profits. There are some other factories that should have moved because their chemicals damage bridge piers. They only care about profits, not our health (M, 35).

In a similar way, Beverly Wright (2005) noted that if affluent members lived where powerless and minority people lived, both government and industrialists would have been far more careful to prevent pollution. As the above quotations suggest, pollution can be easily prevented if they were part of an upper class broadly supports the work of other studies in this area linking social-economic inequality with environmental quality (Boyce 1994, 2008; Cushing et al.,2015). Researchers pointed out that socioeconomic factors are attributable to one's health and the likelihood of being harmed by air pollution (O'Neill et al., 2003). However, like Burningham and Thrush (2003) noted, it is essential not to underestimate the harmful impact of studies linked to poverty and poor environmental conditions. Those studies, indeed, might contribute to the stigmatization of the community rather than improving the quality of life in the region (Burningham and Thrush, 2003).

In general, a job versus environment phenomenon can be found among my respondents. It is likely to claim that residents are more fearful about economic difficulties than contamination and possible health risk. As a result, most interviewees have focused on industrial growth and economic growth as a possible solution to their unemployment problem. Economic insecurity felt by community members has been one of the primary indicators to consider not to put environmental degradation problems as potential risks to health and well-being. There are similarities between the attitudes expressed by many participants on economic dependence in polluting industries described by Gould et al. (2004).

Nevertheless, Vanesa Broto (2013) criticizes studies that prioritize employment security over environmental protection debate. She criticizes earlier studies concentrated on that duality. She suggests that studies should not address the job versus environment controversy since employment, environmental quality, and people's and communities' well-being are interlinked. For her, all of them, employment and environment protection needed to be referred to as essentials to make up a healthy community (Broto, 2013). Rather than assuming that people exchange their quality of environments for the sake of income, in Dilovası as well, considerable

attention should also be given to how they interpret income level's role to oppose polluting industry activities. As stated by earlier respondents, high-income levels would help them focus on their environmental quality rather than struggling to afford basic needs. Undoubtedly, there were other respondents who also thought accepting high-paying jobs from the industry would mean they would be forced to turn a blind eye to the bad environmental quality.

Nevertheless, many of the Dilovası residents I spoke to said they would be willing to work for the industry even though they know the health damage the industry is causing. In each of these possibilities, individuals focused mainly on better living conditions. This demonstrates once again that contaminated communities are not homogenous in their objectives.

CHAPTER 6

CONCLUSION

Since the political agenda in Turkey continues to offer economic growth as the solution to all problems, numerous health, and environmental problems continue to be overlooked. Even though it was widely covered in the national media in the early 2000s, unfortunately, the environmental health concerns were still not over for Dilovası residents. Environmental degradation in Dilovası has been hotly debated for many years by scholars, journalists, and politicians in different manners, yet problems continued. What is certain is that I think Dilovası is sacrificed for industrial development. Nowadays, Dilovası has five organized industrial zones. The surrounding area includes significant roads, ports, high traffic volume, and small paint and chemical factories that threaten the land space, environment, humans, and non-humans. The industrial expansion will pose a continuing threat to residents who don't have economic resources to leave and the environment.

While economic and industrial growth serves to enrich some individuals, adverse impacts fall disproportionately on low-income communities living nearby industrial facilities. Through this thesis, I aim to answer what it meant to live in Dilovası for residents? Since many families had been living beginning from the 1960s, most residents pointed out that the worst pollution problems were in the early 2000s claiming that things had changed for the better in the last 20 years. Strong community ties and the role of individual's cultural values also led positive viewpoint of living in Dilovası among residents.

Nevertheless, Dilovası, which welcomed economic immigrants from eastern and northern Turkey, is also one of the best and safest locations to live, according to some locals.

This thesis put the concept of "toxic contradiction" to contribute to the literature. In doing so, I wanted to emphasize that individuals' accounts for positive and negative impacts of living with pollution persistently contradict even sometimes in one's same sentence. Their relationship with environmental pollution is not entirely based on health and environmental impacts. Instead, they are associated with broader relations that include distrust in media and government officials, family cultural upbringing, priority in life, and socio-economic status.

One of the critical findings of this thesis is that the stigmatization of Dilovası for many years in the media as cancer valley turns this public health issue into private trouble that impacts individuals' employment chances, social relations, and psychological health in the long run.

This thesis mainly aims to explore how different industrial facilities and polluting factors affect the locals and their environment. Each of the stories of residents reveals a different aspect of living with pollution. While some individuals resented the media's representation of Dilovasi, saying that this negative coverage led to the stigmatization of Dilovası residents. They said that this negative label prevented them from finding jobs and even civil servants such as teachers who were sent there as a part of their job refused to live in Dilovası. Instead, they lived in Gebze or other neighboring towns and only traveled to Dilovası for work. This meant that the town's population decreased over time, and there were fewer investments by the government.

Others discussed the reasons why they do not believe that they live in a cancer valley. Some of these people believed that the cancer valley news was spread by the industry to chase the locals away without paying any compensation. On the other hand, some saw cancer as a common disease, saying that they had family members who had cancer in the east. Few believed that sicknesses could only be explained by God and God

only. Most crucially, many respondents I talked to cannot attribute their ill-health to pollution. Yet, the critical point is that whether residents link their ill-health to living near industries or not, it is true that the area has a higher cancer rate than average. Even though the state covers medical treatment in Turkey, long-term illnesses stop people from going to work. Since these families work in short term, unregistered jobs, they do not get sick pay, and this further negatively damages their budget.

Experiences of pollution also changed due to the location of the neighborhoods. While Kayapınar, Turgut Özal neighborhood predominantly suffers from coal dust sticking to furniture and clothes, Fatih residents complain about chemical tanks next to their homes. Nevertheless, Diliskelesi residents are tired of inhaling chemical releases. I also found that how the industries affect daily lives depends on people's perception of pollution. Hence, while some respondents do not take any precautions, others take excessive precautions such as wiping coal dust multiple times a day. Thereby, Dilovası's pollution problems are not unified. Even though residents have their pollution problems, they still seem to think that other neighborhoods are more dangerous and dirty than theirs. This could be a coping mechanism and help them continue living in their own homes.

What I found is rather a complicated experience of individuals with their surrounding environments. For instance, the locals deemed the upper industrial site cleaner saying that they were newer factories, thus more in line with the environmental policies. They support this claim by saying that pollution levels had diminished since the 2000s even though the upper industrial site continued to expand. This might also be explained because the upper industry is situated on top of the hill away from residential areas, unlike the other industrial areas such as Dilovası OIZ right next to people's homes. So the locals don't experience their polluting activities firsthand. Most of the residents I spoke to didn't even know what type of factories were in the upper site, while they could name most of the factories that were near them. Another essential point to note here is that factories in the upper industrial site employ more Dilovası residents. They might feel more sympathetic towards the upper site since they were unemployed for

years even though they lived next to factories and newly opened factories from the upper site offered them a job opportunity.

Nonetheless, I showed the contradiction between economic security and environmental opposition where many residents believed that industrialists do not provide them good-paying jobs because they know that it will give locals an economic power to oppose “dirty” businesses. Many residents also expressed that they would want industries to invest more in the area. For many residents, even though well-known factories are located in the area, the lack of parks and youth centers was a sign that factories do not care for the residents. My findings support that environmental quality and socioeconomic status are linked in Dilovası. This, indeed, further results in many residents focusing on the lack of social investments and economic problems before addressing environmental pollution.

Contaminated communities are not homogenous. This thesis makes it clear that there can be no single explanation of how people perceive environmental degradation’s impact on their lives. While some locals are not deterred by the environmental pollution problems of Dilovası since it is also a sign that the country is producing and growing economically, some are negative or uncertain about its possible health risks in the future. A reasonable guess is impossible in the face of this ambiguity concerning Dilovası’s ongoing health and environmental risk. Depending upon how the host community perceives the risk and cost, and benefits of living close to industry, coping strategies and conflicting strategies are set forth in this thesis. Underpinning the current situation in Dilovası that both environmental and employment problems grew simultaneously, it is crucial to understand what keeps those people in Dilovası. As I tried to explain in this thesis, the lack of residential options in Dilovası, doubts about the land registry problems, socio-economic difficulties, and possible relocation news might have helped to account for the explanation. At the same time, each possibility shapes the toxic contradiction among residents.

Relocation has long been seen as a catch-all solution to the problems in Dilovası. However, locals don't seem to believe it will happen anytime soon since the industry and the government would need to agree on how to compensate the locals. Even if relocation was the case, what would happen to the people who insist on staying in Dilovası due to strong community relations? For instance, in one neighborhood, locals favor relocating coal processing sites and construction of TOKİ apartments. In another one, residents believe that relocation of coal processing site is not the best solution because their problems with chemical, iron-stell smelting plant, and paint industries are more severe. Still, there is a robust local opposition addressing the impact of coal smelting plants on local people's health and daily lives. The coal dust and smell issues are crucial to the local protests in Dilovası. Although organized industrial zones located in the upper parts and cement industry has had severe environmental problems and the fact that one of the chemical tanks in the Fatih neighborhood exploded years ago, some local people still favour these factories since they provide them employment. Due to strong opposing sides about employment, industry, and health risk, the collective mobilization of Dilovası residents seems weak. Nevertheless, the lack of strong local opposition to polluting industries in Dilovası contrasts with the cases of many environmental protests in Turkey focused on mining and thermal power plant projects.

Even though hundreds of factories exist in this small town, unemployment is a common issue in Dilovası. On the other hand, most locals continue to believe that economic development through industrial progress will be their savior. Most of the participants in this study expressed their hopes and dreams to one day work for one of the well-paid positions in the factories. Or they wished it for their children. Despite the ongoing environmental, economic, and health problems, they continue to be hopeful. They believe that their issues, at least the economic ones, will be solved in the future.

The locals' daily lives are located at the very intersection of state and industry relations. It is even becoming difficult to believe that threat of industrial growth in the

region lessens due to excessive industrial development projects, motivated by the growth fetishism of Turkey. In this thesis, I show that when people live in degraded communities, their economic security becomes threatened. Their job prospects disappear, their community becomes stigmatized, their property becomes devalued, thus forcing them to stay in these degraded communities. This starts a vicious cycle preventing the residents from moving elsewhere to start new lives.

All in all, one of the main conclusions of this thesis is that not every community is affected by environmental degradation problems equally. I have an explicit intention of showing that low-income communities suffer environmental degradation problems more than affluent ones. This is even true among the different neighborhoods in Dilovası. As I demonstrate, those who can afford to pay more rent prefer to move to Tavşancıl to get fresher air. Thereby, my thesis owns much to the central claims of environmental justice literature showing the link between poverty and environmental degradation. The threat to one's quality of life escalated when low-income groups could not afford to move somewhere else. While supporting the central claims of the environmental justice movement, this case study also elaborates on the issue of socio-economic inequalities' broader relation to environmental and health risks.

The social, political, and economic dynamics of communities, the local's migration history, and the dynamics between state, industry, and the community are essential to understand how individuals perceive their contaminated surroundings. With this thesis, I hope to show that the Dilovası case will contribute to a better understanding of what environmental justice means for the affected communities. Because the industrial potential of Dilovası and the expansion of industrial areas continue to entail severe health and environmental risk, understanding Dilovası residents' perceptions of the industry and environmental degradation can offer what can be done to tackle environmental injustices in Turkey.

To conclude, this study generated a novel insight into society and environmental contamination relations with a case study from Turkey. This thesis is the first detailed

case study that explores how residents have experienced environmental contamination in Turkey within a broad perspective, including the perception of pollution, health problems, employment opportunity, state and industry relations, and stigma. Although it may be one of the first studies focusing on pollution issues from residents' perspectives, Turkey's environmental pollution problems continue to threaten different communities.

My findings also raise important questions about how toxic contradiction in Dilovası challenges the understanding of sacrifice zones. Here, in Dilovası, although residents live adjacent to polluting industries, they often do not believe that they live in a poisoned place. Thereby, even if I argue that Dilovası is sacrificed for industrial and growth fetishism of Turkey, this thesis provides many individual stories for inaction, non-reaction, disbelief for industrial pollution's hazardous impact on the environment, and their health. Without a doubt, the findings reported here shed new light on how toxic contradiction among residents has transformed the environmental justice movement in Dilovası. Despite many successful environmental justice cases around the globe, Dilovası represents a weak community-led collective action against polluting industries. In Dilovası, lack of action arose from contradictory accounts of individuals about employment, industrial growth, relocation, pollution, stigma, and health risks. Like Neumann (2016) says, "inaction, though often more difficult to explain than action, is much more common, particularly when it comes to community responses to potential or established environmental harm" (p. 432). Despite its limitations, this thesis certainly adds to our understanding of collective inaction. Although I have shown the multiple contradictory responses of individuals living in contaminated places, future research and thought are necessary to address the non-participation and inaction of toxic communities.

The former academic studies concerning Environmental Justice in Turkey do not account for the contradictory views of residents' experience of environmental health risk, stigmatization, sources of pollution, and relocation but instead focus on the active

role of locals in protecting their environment. Future studies are needed on how contaminated communities in Turkey perceive their living environments.

What is now needed is a study involving the broader relations that suppress the emergence of the environmental justice movement in Dilovası. Continued efforts are needed to make contaminated communities more visible and influence factors that lead to different motivations to continue living in polluted environments. More academic studies are needed to make the multi-layered relationships of individuals living in polluted communities more visible and to understand and reveal the different motivations behind the continuation of individuals living in polluted areas in areas where environmental pollution is intense, and the various relationship networks that lead individuals to live in degraded environment.

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APPENDICES

A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

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20 Mayıs 2021

Konu : Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi : İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Dr. Öğr. Üyesi Antoine Dolcerocca

Danışmanlığını yaptığınız Mediha Didem Karagence'nin "Kirlilikle Yaşamak: Dilovası Sakinlerinin Yaşamlarını Anlamak" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **171-ODTU-2021** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Dr.Öğretim Üyesi Şerife SEVİNÇ
İAEK Başkan Vekili

B. DİLOVASI ARAŞTIRMASI MÜLAKAT SORULARI

A. Tanışma ve Mahalle

- Sizi biraz tanıyabilir miyiz? Yaşınız, Doğum yeriniz?
- Nerelisiniz?
- Dilovası'na ne zaman ve hangi sebepten taşındınız?
- Sizce Dilovası'nda yaşamak ne demektir? Burada yaşamakla ilgili en çok neleri seviyorsunuz?
- Yaşadığınız mahalleyi diğer mahallelerden ayıran en büyük özelliği nedir? Hiç mahallenizden taşınmayı düşündünüz mü?

B. Sanayi

- Dilovası'ndaki sanayileşme sürecini hakkında ne biliyorsunuz, neler söyleyebilirsiniz? Siz taşındığınız zaman OSB var mıydı?
- Sizce sanayileşmenin Dilovası'na artıları ve eksikleri ne olmuştur?
- Dilovası'ndaki sanayileşmenin mahallenize iş imkânı sağladığını düşünüyor musunuz?
- Ailenizden veya çevrenizden fabrikalarda çalışanlar var mı? Evde çalışanlar Dilovası'nda mı çalışıyor?
- Sizce sanayileşme ve çevre koruma birlikte nasıl mümkün olabilir? Sizce Dilovası buna nasıl bir örnek oluşturuyor?

C. Çevre ve Kirlilik

- Sizin için çevre ne demek?
- Çevre kirliliğini nasıl tanımlarsınız?
- Kirliliği ilk ne zaman ve nasıl fark ettiniz?

- İlk geldiğiniz zaman ile şimdiki zaman arasında mahallenizin çevre kalitesinde nasıl bir değişim var? Yıllar içinde iyileşti mi kötüleşti mi? Değişen şeyler neler? Değişimin sebebi ne olabilir?
- Sizce Dilovası'ndaki mahalleler arasında çevre kirliliğine dair farklar var mı?
- Dilovası'nda bazı mahallelerin kirlilikten daha fazla etkilendiğini düşünüyor musunuz? Hangi mahalleler? Sizce ne yapılmalı?
- Mahallenizdeki kirlilik diğer mahallelere kıyasla nasıldır? Bunu eşitsizlik olarak görüyor musunuz? Sebebi ne olabilir?

D. Sağlık

- Sanayiyle iç içe yaşamanın sağlığınızı olumlu ya da olumsuz etkilediğini düşünüyor musunuz?
- Herhangi bir sağlık sorununuz var mı? Var ise nedir? İlk ne zaman fark ettiniz? En çok hangi şikâyet ile doktora başvuruyorsunuz?
- Çevrenizde sanayiden kaynaklı sağlık sorunları yaşayanlar var mı? Sizce insanlar neden hasta oluyor?
- Sizce hastalığınız yıllar içinde iyileşti mi kötüleşti mi? Dilovası'ndan ayrılınca sağlığınıza dair bir değişim gözlemliyor musunuz?
- Sizce kötü sağlık koşullardan kim sorumlu?
- Peki çevre kirliliği ve bunun getirdiği olası sağlık sorunları (eğer var ise) sosyal hayatınızı nasıl etkiliyor? Daha az mı dışarı çıkıyorsunuz?
- Hastalığınız varsa bu çalışma durumunuzu nasıl etkiliyor?
- Çalışıyor ise iş hayatınızı nasıl etkiliyor? [Çocuğu var ise (ve/veya okul çağında bir birey ise) eğitim hayatını nasıl etkiliyor?]
- Evinizde hasta biri var mı? Ne tür bir hastalığı var? Eğer hasta çocuk ise, okula gidebiliyor mu?
- Bakımını nasıl sağlıyorsunuz? Masraflarını nasıl karşılıyorsunuz? Harcamalarınız hastalıkla birlikte ne yönde değişti?

E. Gündelik Yaşam

- Kirlilik günlük yaşamınızı nasıl etkiliyor?

- Nasıl önlemler alıyorsunuz?

F. Sosya-Ekonomik Bilgiler

- Ne işle uğraşıyorsunuz? Eşiniz varsa o ne iş yapıyor?
- Hanenizin aylık toplam geliri ne kadardır?
- Oturduğunuz ev kira mı yoksa kendinize mi ait? Kira ise ne kadar kira ödüyorsunuz?
- Eviniz 2B veya orman arazisi üzerine mi? Bu durum ne tür sonuçlara sebep oluyor? Kısaca açıklayabilir misiniz?
- Kendinizi hangi gelir ya da ekonomik grubuna ait olarak görüyorsunuz?

G. İdari Makamlarla İlişkiler

- Mahallenizdeki en önemli üç çevre problemi nedir? Bu problem nerede kaynaklanmaktadır? Çözüm önerileriniz neler?
- Çevre kirliliğine dair bireysel veya toplu olarak muhtara/belediyeye başvurdunuz mu? Başvurduysanız başvuru sebebi nedir?
- Çevre kirliliğine dair Dilovası Belediyesinden ve sanayicilerden talepleriniz nelerdir?
- Dilovası Ekoloji ve Sağlık Derneği, Dilovası Çevre Derneği, Dilovası Yaşam Derneği hakkında ne biliyorsunuz? Üyesi misiniz? Eğer üye iseniz ne tür faaliyetler yürüyorsunuz?

H. Değişim, Dönüşüm ve Gelecek

- Medyada yer alan Kömürcüler OSB'nin taşınması ile ilgili ne düşünüyorsunuz?
- Sizce Kömürcüler OSB mi taşınmalı yoksa mahalleler mi? Mahalle ise hangi mahalleler ve neden taşınmalılar?
- Medyada yer alan Tavşancıl Mahallesine yapılması planlanan 1200 yeni konut projesi hakkında ne düşünüyorsunuz?
- Sanayinin ve Dilovası'nın geleceğini nasıl görüyorsunuz? Sizce birlikte yaşam mümkün mü?
- Sizce Dilovası'nda yaşayanların sağlıkları ve çevreleri için neler yapılmalı?
- Kendi geleceğinizi (varsa çocuklarınızın geleceğini) nasıl görüyorsunuz?

- Son olarak Dilovası'nda yaşamaya dair en büyük endişeniz ve en büyük umudunuz nedir?
- Eklemek istedikleriniz var mı?

C. DILOVASI INTERVIEW QUESTIONS

A. Introduction and Neighborhood

- Can you share some information about your age, place of birth?
- Where are you from?
- When and why did you move to Dilovası?
- What do you think it means to live in Dilovası? What do you like most about living here?
- What makes your neighborhood different from others? Have you ever thought of moving out of your area?

B. Industry

- What do you know about the industrialization process in Dilovası? What can you say about it? Was there any OIZ when you moved?
- What do you think are the pros and cons of industrialization for Dilovası?
- Do you think that industries here provide job opportunities to your neighborhood?
- Do you have any family members or friends working in nearby factories?
- What do you think about environmental protection and industrialization? Do you think both are possible?

C. Environment and Pollution

- What does the environment mean to you?
- How do you define environmental pollution?
- When and how did you first notice the pollution?
- What is the change in the environmental quality in Dilovası? Has it gotten better or worse over the years? What can be the reason for the change?

- Do you think there are differences in environmental pollution between neighborhoods in Dilovası?
- Do you think that some neighborhoods in Dilovası are more affected by pollution? Which ones? What do you think should be done?
- How does the pollution in your neighborhood compare to others? Do you see this as inequality? What would be the reason for this inequality?

D. Health

- Do you think that living nearby industrial facilities affect your health?
- Do you have any health problems? If there is, what is it? When did you first notice? With which complaints do you apply to the doctor the most?
- Do you have any people around who have health problems caused by the industry? Why do you think people get sick?
- Do you think your disease has gotten better or worse over the years? Do you observe a change in your health status after leaving Dilovası?
- Who do you think is responsible for the poor health conditions?
- How do environmental pollution and its possible health problems (if any) affect your social life? Are you going out less?
- If you have a disease, how does it affect your work life?
- How do health problems affect your children's education if you have a child?
- Is there someone sick in your home? If yes, what kind of disease she has? If she is a child, can she go to school?
- How do you provide care? And how do you cover the health expenses? Do you spend more money now on medicals? How does your spending change with the health problems?

E. Daily Lives

- How does environmental pollution affect your daily life?
- What precautions do you take?

F. Socio-Economic Information

- What is your job?
- What is approximately your household's monthly income?
- Is it your own house or rent? How much rent do you pay?
- Is your home on 2B or forest land? Do you own your title? What consequences does this cause? Can you explain briefly?
- Which income or economic group do you see yourself?
- **G. Relations with Authorities**
- What are the three most critical environmental problems in your neighborhood? What are your solution suggestions?
- Have you applied individually or collectively to the municipality regarding environmental pollution? If you do so, what was your reason?
- What is your demand from both state actors and industrialists regarding industrial pollution?
- What do you know about Dilovası Ecology and Health Association, Dilovası Environment Association, Dilovası Life Association? Are you a member of any? What kind of activities do you carry out if you are a member?

H. Change and Future

- What do you think about the relocation news about coal processing sites in the media?
- Do you think coal processing sites should be relocated or neighborhoods? If it is a neighborhood, which neighborhoods? And why?
- What do you think about the TOKİ housing project planned to be built in the Tavşancıl neighborhood?
- How do you see the future of the industry and Dilovası? Do you think living together is possible?
- What do you think should be done for the health and environment of those living in Dilovası?

- How do you see your future (your children’s future, if any)?
- Finally, what are your biggest concerns and hope for living in Dilovası?

D. TURKISH SUMMARY / TÜRKÇE ÖZET

Günlük hayatımız içinde yaşadığımız çevreden doğrudan etkilenmektedir. Her ne kadar sağlıklı bir çevrede yaşamak her bireyin hakkı olsa da bu durum toplumun her kesimi için geçerli değildir. ODTÜ'de çevre sosyolojisi dersinde çevre adaleti literatürünü tartışırken, Dilovası'nın medyada çoğunlukla kanser ovası olarak bilinmesinin, orada yaşayan yerel halkı nasıl etkilediğini merak etmeye başlamıştım.

Günümüzde Kocaeli'nde toplamda 13 Organize Sanayi Bölgesi bulunmaktadır. Kocaeli'nin yüzölçümü 118 km2 olan ilçesi Dilovası'nda ise 5 adet Organize Sanayi Bölgesi bulunmaktadır. Dilovası'nın Türkiye'nin en önemli sanayi kuruluşlarını barındırması, kimya fabrikalarına ev sahipliği yapması ve merkezi konumu ile çok önemli bir sanayi kentimiz olarak bilinmektedir. Aynı zamanda bu bölge sanayinin yol açtığı çeşitli sağlık ve çevresel riskler açısından da basında da önemli bir yere sahiptir.

Bilim insanlarının ve kamuoyunun konu üzerine yoğunlaşması sonucu oluşturulan Dilovası TBMM Araştırma Komisyonu, 2006'da kirliliğin insan ve çevre sağlığı üzerindeki etkilerini sunan bir rapor yayınladı. Rapor özellikle metal, boya ve kimya sanayi kuruluşlarının yol açtığı çevre sorunlarının yanında gürültü ve görüntü kirliliğinin de endişe verici boyutlara ulaşmış olduğuna vurgu yapmakta ve çözüm önerileri sunmaktaydı. Raporda Dilovası'nın topoğrafik yapısının, bölgedeki kirletici endüstri faaliyetleri ve yerleşim yoğunluğunun sanayi ile iç içe olması sebebiyle daha fazla sanayinin bölgeye yatırım yapmamasına vurgu yapılıyordu. Buna ek olarak, raporda var olan kirletici sanayi faaliyetlerinin Dilovası'ndan taşınması gerektiği yer alıyordu. Raporun 2011'de süresi sona ermesine rağmen, kirlilik bölgede hala önemli bir sorun.

Türkiye'de sanayi kirliliğin basında en çok yer alan örneklerinden biri olan Dilovası, 2000'li yıllardan beridir yüksek kanser oranları ile ön plana çıkmaktadır. Dilovası'nın potansiyel çevresel kirlilik ve sağlık açısından riskli bir bölge olduğu akademik çalışmalarda dile getirilmiş olmasına rağmen, bu konuda güçlü bir kamuoyu oluşturulamamış ve çevresel kirlilik ve sağlık sorunları günümüzde de bölgede devam etmiştir. Dilovası ve çevresi yüksek trafik hacmi yoğun yolları, limanları, küçük boya ve kimyasal fabrika varlığıyla çevreyi, insanları ve insan olmayanları tehdit etmektedir. Endüstriyel büyüme, sosyal ekonomik açıdan düşük gelirli sakinler ve çevre için sürekli bir tehdit oluşturmaktadır. Yayınlanmış birçok çalışma, Dilovası'nın çeşitli sosyal, ekonomik ve çevresel konularını ele almaktadır. Fakat Dilovası bölgesi çevre adaleti literatürünün temel argümanları göz alınarak çalışılmamıştır. Bu tez, akademik alana çevre adaleti literatürünün temel argümanlarını, Dilovası örneği ile tartışmaya açarak anlamaya çalışmaktadır.

Türkiye'de siyasi gündem tüm sorunların çözümü olarak ekonomik büyümeyi çözüm olarak sunmaya devam ederken, birçok sağlık ve çevre sorunu da göz ardı edilmiş oluyor. Bu tezin ortaya koymaya çalıştığı ana tartışma konusu Dilovası'nın çevre adaleti literatürünün en temel argümanlarından birine örnek oluşturmasıdır. Çevre adaleti literatürünün en temel argümanı şudur: Çevre adaletsizliği düşük gelirli ve azınlıkta olan toplulukları varlıklı toplumsal kesimlerden daha fazla etkilemektedir. Çevre adaletsizliğine uğrayan topluluklarda çevre ve sağlık sorunları riskinin çok daha fazla olduğu çeşitli araştırmalar ve akademik çalışmalarla vurgulanmıştır.

Bu çalışmanın özgün bir katkı sağladığı birkaç önemli alan vardır. Öncelikle bu tez, yerelin çevresel kirlenme ve bozulmayı nasıl deneyimlediğini anlamlandırmak adına nitel bir araştırma yöntemine başvurmuştur. Buna bağlı olarak bu tez, Dilovası sakinlerinin kirlilik deneyimlerini anlamaya çalışmıştır. Bu nedenle birinci bölümde Dilovası'nda kirliliğin ilk fark edildiği yıllara, sanayinin gelişim sürecine ve akademisyenlerin çevre sağlığı riskine işaret eden çalışmalarına odaklanılmıştır.

Dilovası'ndaki çevresel bozulma, bilim insanları, gazeteciler ve politikacılar tarafından uzun yıllardır farklı şekillerde tartışılmaya devam ediyor olsa da çevre problemleri hala bir çözüme kavuşmuş durumda değil. Dilovası bölgesi yıllar boyunca çeşitli araştırmaların endüstriyel büyümenin ve plansız sanayileşmenin çevre topluluklara olumsuz etkisini tartışıldığı bir yer olmuştur. Fakat bölgedeki tüm kirlilik uyarılarına rağmen, yeni faaliyete geçen sanayi kuruluşları ve fabrikalar, potansiyel kirletici faaliyetleri nedeniyle halk ve çevre sağlığına bir tehdit oluşturmaktadır.

Buna bağlı olarak bu tez, çevre kirliliğinin toplumları nasıl etkilediğini anlamak üzerine, Dilovası sakinlerinin hikayelerini anlamlandırmaya çalışmaktadır. Bu tez Dilovası sakinlerinin çevre sorunlarını nasıl anlamlandırdıkları ve Dilovası'nda ikamet eden bireylerin kirletilmiş bölge ile nasıl ve hangi anlamlandırmalar aracılığıyla etkileşime geçtiğini araştırmaktadır. Bu tezdeki amacım çevre ve toplum arasındaki ilişkinin anlaşılmasına katkıda bulunmaktır. Bu amaçla bu tez aşağıdaki araştırma sorularını yanıtlamaya çalışmaktadır:

1. Sanayiden kaynaklı çevresel kirlilik, kirletilmiş bölgelerin yakınında yaşayan mahalle sakinlerini nasıl etkilemektedir?
2. Mahalle sakinleri deneyimleri sonucunda çevre kirliliğini, istihdamı, sanayileşmeyi ve çevreyi nasıl tanımlarlar?

Bu çalışmanın iki aylık sahası sırasında dokuz farklı mahallede toplamda kırk beş Dilovası sakini ile derinlemesine görüşmeler gerçekleştirdim. Derinlemesine mülakat soruları ODTÜ Sosyal Bilimler Enstitüsü Etik Kurulu tarafından onaylanmıştır. Bu çalışma için görüşülen kişilerin neredeyse tamamı Dilovası'nda 30 yılı aşkın bir süredir yaşamaktadır veya en az beş yıldır ikamet etmektedir. Katılımcılara kar topu tekniği ile ulaşılmıştır ve COVID-19 koşulları nedeniyle hem katılımcıların hem de araştırmacının sosyal mesafe kurallarına uymasına özen gösterilmiştir. Katılımcılarla ortalama kırk beş dakika süren görüşmeler gerçekleştirilmiştir. Araştırma sorularım sırasında mahalle, sanayi, çevre ve kirlilik, sağlık, günlük yaşam, sosyoekonomik

durum, idari makamlarla ilişkiler, değişim ve gelecek olmak üzere 8 ana konuya odaklandım.

Çevre adaleti literatürünün ana argümanına, Dilovası üzerinden anlama girişiminde bulunan bu tez, Kuzey Amerika'da başlamış olan çevresel adalet çalışmaları ile giriş yapmaktadır. İlerleyen bölümlerde ise dünyanın farklı bölgelerinde çevre kirliliği ile yaşama deneyimlerine odaklanan tartışmalara yer vermektedir. Akademisyenlerin, çevre kalitesi bozulmuş ortamların, yakınlarında yaşayan yerel halkın gündelik yaşam deneyimlerini nasıl etkilediğini tartıştıkları çalışmalarına da bu tez kapsamında yer verilmiştir. Kanser ovasında yaşayan bir birey olarak etiketlenmenin, sanayiyle çevrili bir bölgede yaşamalarına rağmen çoğu sakinin işsizliği nasıl tecrübe ettikleri, sağlık sorunlarını nasıl anlamlandırdıkları, çevre kirliliği ve sağlık sorunları riskine rağmen sanayinin gün geçtikte Dilovası'nda büyüyerek genişlediğini nasıl yorumladıkları ve bu değişimlere hangi açılardan uyum sağlayıp hangi açılardan karşı oldukları bu tezde tartışılan ve yer verilen en önemli konulardır.

Tezin saha bulgularını tartıştığı ilk bölümü yerel halkın seneler içerisinde gözlemlediği çevresel kirlilik değişimine odaklanmaktadır. Dilovası'nda 1960'larla birlikte artan sanayileşmeyle, Türkiye'nin doğusundan ve kuzeyinden iş bulmak amaçlı gelen göçmen nüfusu bölgenin yerleşim yapısını şekillendirmeye başlamıştır. Sonraki yıllarda artan sanayileşme ile birlikte de Dilovası Marmara bölgesinin sanayi merkezlerinden biri olarak tanınmaya başlamıştır. Görüşmeciler öncelikle Dilovası'nın çevresel kirlilik ve sağlık riskleriyle anılmasından şikayetçi olduklarını belirterek, sosyal ilişkilerin ve yakın ilişkilerinin şekillendirdiği yaşam tarzlarına vurgu yapmışlardır. Örneğin, görüşmecilerin birçoğu kapılarını açık bırakmalarının ve çocuklarının gece geç saatlere kadar dışarıda oynamalarına izin verebilmelerinin Marmara'da yer alan başka bölgelerde mümkün olamayacağını belirtmişlerdir. Tüm bu yakın ilişkiler ve sakinler arasındaki güvene rağmen, Dilovası'nın medyada yüksek suç ve uyuşturucu oranları ve kirlilik konusuyla anılmasının, bölgedeki olumlu özelliklerin duyulmasının önüne geçtiğini belirtmişlerdir.

1960 yılından itibaren Dilovası, birçok yabancı ve ulusal sanayinin yerleştiği bir yer olmaya başlamıştır. Çevre adaleti literatüründe birçok bilim insanı, yoksul ve etnik azınlık bölgelerine kasıtlı olarak getirilen kirletici endüstrilerin varlığını tartışmaktadır. Bu endüstriler çoğunlukla yoksul ve azınlık nüfusunun olduğu bölgeleri tercih etmektedirler çünkü bu sayede karşılarında çevresel kirlenme ve sağlık risklerine karşı gelebilecek güçlü bir çevresel muhalefet bulmamayı ummaktadırlar. Dilovası'ndaki durum da buna işaret etmektedir. Görüştüğüm kişilerin çoğu, Türkiye'nin Doğu Anadolu ve Karadeniz Bölgelerinde istihdam olanaklarının yetersizliğine vurgu yaparak, Dilovası'na iş imkanları için ailecek veya sonradan ailelerini yanlarına alarak taşındıklarını dile getirdiler. Zamanla bölgedeki hem işçi nüfusu hem de sanayi kuruluşu artmıştır.

Sosyoekonomik faktörler bireylerin çevresel kirlilikten etkilenmesini daha da artırmaktadır. Herkesin bir dereceye kadar toksinlere maruz kaldığını kabul etsek bile, kirletici endüstrilere yakın yaşayan mahallelerin en yüksek riske sahip olduğu açıktır. Çevre adaleti alanındaki öncül çalışmalar, bu tezde kirletilmiş bölgede yaşayanların yaşam deneyimlerinin anlaşılması konusunda yol göstericidir.

Dilovası'nın basında yer alan kanser ovası haberleriyle değişen imajı, diğer insanların Dilovası'nda yaşayanları kirli ve tehlikeli gördüğü bir yere dönüşmüştür. Bu durum emlak ve konut fiyatlarının yakın ilçelere göre daha hızlı bir şekilde düşmesine ve düşük ekonomik gelir grubuna ait olan sınıfların bölgeye göç etmesine imkân sağlamıştır. Emlak fiyatlarının düşmesiyle yoksullaşan yerel halk ise bölgeden taşınabilecek maddi imkanlarını kaybettiklerini belirtmiştir. Dilovası sakinlerinin, basında yer alan olumsuz haberlere, çevre ve sağlık açısından riskli bir bölge olduğunun belirtilmesine rağmen Dilovası'nda yaşamaya devam etmesinin sebepleri sadece ekonomik yatırımlarla ve sosyoekonomik konum ile açıklanamayacak kadar karmaşık ve katmanlı bir ilişkiler toplamıdır. Bireylerin sosyoekonomik durumu ve işsiz kalma korkuları gibi gelecek projeksiyonları neden kolayca taşınamadıklarını açıklamakta yeterli değildir. Yakın topluluk ilişkileri ve kültürel değerler, insanların

Dilovası'ndaki sosyal ilişkilerini olumlu yönde etkilemekte bu da insanların Dilovası'nı diğer şehirlerden farklı bir konumda değerlendirmelerine yol açmaktadır.

Son zamanlarda "Yükselen Şehir Dilovası" sloganlarıyla Dilovası'nın imajını yeniden canlandırmaya çalışan belediyenin tüm çabalarına rağmen, Dilovası sakinleri kanser ovası olarak etiketlenmenin bölgeye olan yatırımların azalmasına yol açtığının altını çizmişlerdir. Sonuç olarak, bir bölgenin kirlilik ve kanser oranlarıyla etiketlenmesi insanların sadece kirli ve tehlikeli olarak anılmasına neden olmakla kalmaz, aynı zamanda ev fiyat değerlerinin düşmesine yol açarak, sosyoekonomik durumları nedeniyle başka bölgelere taşınmaya gücü yetmeyen bireylerin geleceklerini de şekillendirir.

Bu tez temel olarak farklı endüstriyel tesislerin ve kirletici faktörlerin yerel halkı ve çevrelerini nasıl etkilediğini araştırmayı amaçlamaktadır. Sakinlerin hikayelerinin her biri, kirlilikle yaşamanın farklı bir yönünü ortaya koymaktadır. Araştırmamın en önemli bulgularından biri her mahallenin kendisine özgü çevresel kirlilik profilinin olduğudur. Ayrıca, bazı görüşmeciler medyanın Dilovası'nı temsil ediş biçimine içerlediklerini, bu tarz olumsuz haberlerin Dilovası sakinlerinin küçük düşürülmesine yol açtığını belirttiler. Örneğin, görüşmeciler olumsuz etiketin Dilovası'nda ve diğer şehirlerde iş bulmalarını engellediğini vurguladılar. Dilovası'nın basındaki bu kötü şöhreti hakkında yerel halk bir fikir birliğinde bulunmamaktadır. Birçok Dilovası sakinine göre kanser ovası haberleri, Dilovası'nın güzel yanlarını göz ardı etmektedir. Çoğu sakine göre, Türkiye'nin dört bir yanından göç etmiş insanlarla birlikte uyum içerisinde yaşayabilmesi, Dilovası'nın ön plana çıkarılması gereken en önemli özelliklerinden biridir.

Bu tezin kritik bulgularından biri, Dilovası'nın uzun yıllardır medyada kanser ovası olarak dile getirilmesinin, bu halk sağlığı sorununu, uzun vadede bireylerin istihdam olanaklarını, sosyal ilişkilerini ve psikolojik sağlığını etkileyen kişisel bir sorun haline getirmesidir. Aynı zamanda görüşmecilerim neden kanser ovasında yaşadıklarına inanmadıklarının nedenlerini tartıştılar. Güçlü topluluk bağları ve bireyin kültürel

değerlerinin rolü de Dilovası sakinleri arasında Dilovası'nın olumlu bir özelliği olarak dile getirilmiştir. Bununla birlikte, çoğunlukla Türkiye'nin doğusundan ve kuzeyinden ekonomik göç ile oluşmuş olan Dilovası sakinlerine göre, Dilovası yaşamak için en iyi ve en güvenli yerlerden biri olarak tanımlanmıştır. Görüşmecilerden bazıları, kanser vadisi haberlerinin sanayiciler tarafından yerel halkı herhangi bir tazminat ödemeden kovmak için yayıldığına inanmaktadır. Öte yandan bazı görüşmeciler ise, Türkiye'nin doğusu ve batısında, sanayinin olmadığı bölgelerde kanser hastalığına yakalanmış aile bireylerinin olduğunun altını çizerek, kanseri yaygın bir hastalık olarak gördüklerini belirtmişlerdir. En önemlisi, konuştuğum birçok görüşmeci, sağlık durumlarının çevre kirliliği kaynaklı olduğunu düşünmediklerini belirttiler. Bununla birlikte, pek çok Dilovası sakini sanayicilerin kendilerine iyi ücretli işler sağlamadığına inanıyorlar çünkü sakinlere göre bu durum yerel halkın "kirli" işletmelere karşı çıkmasına imkân sağlayacak ekonomik bir güç sağlayabilir. Birçok bölge sakini, sanayicilerin bölgeye daha fazla yatırım yapmasını istediklerini de ifade ettiler. Birçok bölge sakini için, bölgede tanınmış fabrikalar olmasına rağmen, parkların ve gençlik merkezlerinin olmaması fabrikaların yerel halkı umursamadığının bir işareti olarak görülmektedir. Bu durum, birçok sakinin çevre kirliliğini ele almadan önce sosyal yatırımların ve ekonomik sorunların eksikliğine odaklanmasına neden olmaktadır.

Dilovası'nda yüzlerce fabrika olmasına rağmen işsizlik hala yaygın bir sorun olarak göze çarpmaktadır. Görüşmecilerim çoğunlukla eskiden fabrikalarda çalışan en az bir aile ferdi veya bir arkadaşı olduğunu belirtmelerine rağmen, son yıllarda Dilovası'nda yerel halkın çalıştırılmadığını belirttiler. Yerel halka olan güvensizliğin kaynağını ise basında Dilovası hakkında yer alan haberlerle ilgili olduğunu düşündüklerini belirttiler. İş bulma ve aile üyelerine destek olma ümidi ile Dilovası'na taşındıklarını belirten birçok görüşmeci, Dilovası fabrikalarındaki yerel halkın istihdam sorununun siyasi partiler aracılığıyla çözülmesini umduklarını belirtmişlerdir.

Öte yandan, çoğu yerel halk, sanayileşme ve endüstriyel büyüme yoluyla ekonomik kalkınmanın kurtarıcı olacağına inanmaya devam etmektedir. Araştırmaya katılan

görüşmecilerimin çoğu, fabrikalardaki iyi ücretli pozisyonlardan birinde çalışma isteklerini, buna dair umutlarını ve hayallerini dile getirdiler. Kendileri için olmasa bile çocuklarının, mahallelerinin yakınlarındaki fabrikalarda iş bulmasını dilediler. Sonuç olarak, Dilovası sakinleri, devam eden çevresel, ekonomik ve sağlık sorunlarına rağmen umutlu olmaya devam ediyorlar. Sorunlarının, en azından ekonomik olanlarının gelecekte çözüleceğine inanıyorlar ve bu sebepten sanayinin büyümesini bir gün onlara da iş sağlayacağı umuduyla destekliyorlar.

Dilovası'nda hem çevre kirliliği hem de istihdam sorunlarının aynı anda büyüdüğünü ortaya koyan bu araştırmada, yerel halkı Dilovası'nda yaşamaya motive eden sebepleri anlamak çok önemlidir. Bu tezde, Dilovası'ndaki konut seçeneklerinin eksikliği, tapu sorunlarına ilişkin belirsizlikler, sosyoekonomik zorluklar ve olası taşınma haberlerinin, yerel halkın Dilovası'nda yaşamaya devam etmesini açıklamaya yardımcı olacak sebepler olarak tartıştım. Aynı zamanda, bu her olasılığın, "toksik çelişki" kavramını şekillendirdiğini de öne sürdüm. Görüşme yaptığım Dilovası sakinlerinin çoğu, sanayinin neden olabileceği çevre kirliliği ve sağlık risklerinin farkında olmalarına rağmen evlerinin yakınında kurulmuş olan fabrikalarda çalışmak için istekli olduklarını belirttiler. Bu tercihlerini bireylerin esas olarak, iyi ücretlerle güvence sağlayan işlerde, kendileri ve aileleri için en iyi yaşam koşullarına erişme istekleri olarak yorumladım.

Bu tez, bireyin çevresiyle oldukça karmaşık bir deneyimi olduğunu göstermektedir. Örneğin yerel halk, yukarı sanayi sitesini daha temiz bulduklarını belirtmişlerdir. Bunun sebebi yukarı sanayi sitesindeki fabrikaların yeni olması ve dolayısıyla çevre politikalarına uygun olduğunu düşünmeleri yatmaktadır. Dilovası'nda yaşayan çoğu mahalle sakini, kendi yaşadıkları mahallelerin kirlilik sorunları olmasına rağmen, diğer mahallelerin kendi mahallelerinden daha tehlikeli ve kirli olduğunu düşünmektedirler. Bu tez, insanların çevresel bozulmanın yaşamları üzerindeki etkisini nasıl algıladıklarına dair tek bir açıklamanın olamayacağını vurgulamaktadır. Buradan hareketle, bu tez bir kez daha kirletilmiş toplulukların (contaminated communities) homojen olmadığını vurgulamaktadır. Bazı yöre sakinleri Dilovası'nın

çevre kirliliği sorunlarını, ülkenin ekonomik olarak üretip büyüdüğünün de bir işareti olması algılaması nedeniyle aldırış göstermezken, bazı görüşmeciler ise Dilovası'ndaki çevre kirliliği sorunlarının olumsuz etkilerine ve gelecekteki olası sağlık riskleri konusundaki kararsızlıklarına daha çok odaklanmışlardır.

Ayrıca görüşmeciler sanayi faaliyetlerinin sağlık üzerindeki olumlu veya olumsuz etkilerine ilişkin farklı yorumlarda bulunmuşlardır. Örneğin yıllarca sanayiyle iç içe yaşayan bazı Dilovası sakinlerine göre hastalıklarını fabrikaların kirletici potansiyelleriyle ilişkilendirmek güç iken, diğer katılımcılara göre sağlık sorunları sanayi kirliliğinden kaynaklanmaktadır.

Buna ek olarak, bazı Dilovası sakinleri Darıca ve Bayramoğlu gibi diğer ilçeler ve Dilovası'nın Tavşancıl mahallesinin hava kalitesinin Dilovası'ndan daha iyi olduğunu öne sürerken, kimi diğer sakinler için hava kirliliği konusunda komşu ilçeler ile Dilovası'nın çevre kirliliği potansiyeli aynıdır. Ayrıca birçok görüşmeci Dilovası'nda uzun süredir yaşadıklarını belirterek bu durumun artık onların çevre kirliliğini fark etmemesine neden olduğundan ve çevre kirliliğinin yeni taşınan bir bireye göre onları daha az etkilendiğine değindiler.

Görüşmecilerimin çoğuna göre Gebze, İzmit ve Kocaeli bölgelerinde yaşayan birçok insan da endüstriyel çevre kirliliği sorunlarıyla karşı karşıyadır. Yine de ne yazık ki sadece Dilovası basında zehir ovası ve kanser ovası olarak yer almaktadır.

Bu tez, literatüre katkı sağlamak için "toksik çelişki" kavramını ortaya koymuştur. Bu kavramın en önemli noktası, kirlilikle yaşamanın olumlu ve olumsuz etkilerinin bireylerin açıklamalarının bazen aynı cümlesinde bile ısrarla çeliştiğini vurgulamaya çalışmaktır. Dilovası sakinlerinin çevre kirliliği ile olan ilişkileri tamamen sağlık ve çevresel etkilere dayalı değildir. Bunun yerine, bu tez bu kavramı medyaya ve hükümet yetkililerine güvensizlik, aile kültürü ve yetişme, hayattaki öncelikler ve sosyoekonomik statü gibi daha geniş ilişkilerle açıklamaktadır. Bulgularım, Dilovası'ndaki "toksik çelişki" nin literatürde "feda edilmiş bölge" olarak tanımlanan kavram anlayışına nasıl meydan okuduğuna dair önemli soruları da gündeme getiriyor.

Dilovası'nda yaşayan sakinler her ne kadar çevreyi kirleten sanayilere ve fabrikalara komşu olsalar da çoğu zaman zehirli bir yerde yaşadıklarına inanmadıklarını belirtmişlerdir. Dolayısıyla Dilovası'nın Türkiye'nin sanayi ve büyüme fetişizmine kurban edildiğini iddia etsem bile, bu tez bireylerin sanayi kirliliğinin çevre üzerindeki zararlı etkilerine ve sağlıklarına inanmama konusunda eylemsizliklerine ve tepkisizliğine dair birçok bireysel hikâye de sunmaktadır.

Aynı zamanda bu tez insanların, toplumsal cinsiyet rollerinin, göç hikayelerinin, siyasetin ve iş durumunun çevresel kirlilik ve sağlık risklerini anlamlandırma ve yorumlama sürecinde dinamik olarak etkileyen unsurlar olarak ele almıştır. Kadınlar en çok evin temizliğinden ve çocuklarının sağlıklarından endişe ederken, erkekler daha çok arabalarının üzerinde biriken demir ve kömür tozuna işaret etmiş ve fabrikalarda çalışma isteklerini daha çok belirtmişlerdir.

Bir diğer önemli nokta ise, bu tezin sağlık eşitsizliklerinin, çevresel kalitenin ve sosyoekonomik durumun birbiriyle olan kaçınılmaz bağlantısını gösteriyor olmasıdır. Düşük gelirli gruplar arasında çevresel bozulmalara ve çevresel kirliliğe maruz kalma ve bunun sonucunda ortaya çıkan düşük yaşam kalitesi birbiriyle ilişkilidir. Dilovası barındırdığı beş organize sanayi bölgesi, bir kömür işleme tesis, limanları ve yoğun trafik hacmini barındıran otoyolları ile sosyal imkanlardan yoksun bir sanayi bölgesine dönüşmüştür. Dilovası'nda yerel halkın yeterince yararlanabileceği yeşil alan olmaması, düşük konut kalitesi ve işsizlik sorunları eşitsizliklerin sosyal ve ekonomik boyutuna da işaret etmektedir.

Sonuç olarak, bu araştırma Türkiye'den bir örnek vaka çalışması ile toplum ve çevre kirliliği ilişkilerine yeni bir bakış açısı kazandırmıştır. Ekonomik ve endüstriyel büyüme bazı bireyleri zenginleştirmeye hizmet ederken, olumsuz etkileri endüstriyel tesislerin yakınında yaşayan düşük gelirli topluluklar üzerinde orantısız bir şekilde düşmektedir. Bu tez, kirlilik algısı, sağlık sorunları, istihdam fırsatı, devlet ve sanayi ilişkileri ve etiketlenme dahil olmak üzere Türkiye'de çevre kirliliğinin bir topluluk tarafından nasıl deneyimlendiğini, geniş bir perspektifte araştıran ilk ayrıntılı vaka

çalışmasıdır. Bu tez, çevresel kirlilik sorunlarına bölge sakinlerinin bakış açısıyla odaklanan ilk çalışmalardan biridir.

Bu tezin ortaya koyduğu bir başka sonuç ise, dünya çapında birçok başarılı çevre adaleti davasına rağmen Dilovası'nın kirletici endüstrilere karşı zayıf bir toplumsal kolektif eylem örneğini temsil etmesidir. Dilovası'nda, bireylerin istihdam, endüstriyel büyüme, taşınma, kirlilik, etiketlenme ve sağlık riskleri konusundaki çelişkili açıklamaları bu eylemsizliği anlamamıza yardımcı olmayı ummaktadır. Bu çalışmada, kirletilmiş bölgelerde yaşayan bireylerin birbiriyle çelişen çok sayıdaki yorumlarını ve anlamlandırma süreçlerini, bu yorumlamaların altında yatan ilişkileri göstermeye çalıştım.

Özetlemek gerekirse, bu tezin ana argümanlarından biri, toplumdaki kesimlerin çevresel bozulma sorunlarından eşit şekilde etkilenmediğidir. Düşük gelirli gruplar, ekonomik konumları dolayısıyla çevresel adaletsizlikten daha fazla etkilenmektedirler. Bu tez yoksulluk ve çevresel bozulma arasındaki bağlantıyı gösteren çevresel adalet literatürünün temel iddialarını desteklemektedir. Düşük gelirli gruplar başka bir yere taşınmayı göze alamaz hale geldiğinde, kişinin yaşam kalitesine yönelik tehdit de aynı oranda artmaktadır. Bu tez çalışması, çevresel adalet hareketinin temel iddialarını desteklerken, aynı zamanda sosyoekonomik eşitsizliklerin çevre ve sağlık riskleriyle olan daha geniş ilişkisini de detaylandırmaktadır.

Toplulukların sosyal, politik ve ekonomik dinamikleri, yerelin göç hikayesi ve devlet, sanayi ve topluluk arasındaki dinamikler, bireylerin kirlenmiş çevrelerini nasıl algıladıklarını anlamak için gereklidir. Bu tez ile Dilovası örneğinin, çevresel bozulmada ve kirlenmeden etkilenen topluluklarda, çevresel adaletin ne anlama geldiğinin daha iyi anlaşılmasına katkıda bulunacağını umuyorum. Dilovası'nın endüstriyel potansiyeli ve sanayi alanlarının genişlemesi ciddi sağlık ve çevresel riskler taşımaya devam ettiğinden, Dilovası sakinlerinin sanayiye ve çevresel bozulmaya ilişkin algılarını anlamak, Türkiye'deki çevresel adaletsizliklerin üstesinden gelmek için neler yapılabileceği konusunda bir örnek oluşturabilir.

Türkiye'de çevre adaleti meselesinde medyada yıllardır göz önünde olan Dilovası'nı toplum ve çevre kirliliği meselelerine değinerek irdelediğim bu tezimde; kirliliğin bir çevresel adalet meselesi olduğunu ortaya koyarak toplumun her kesimi için daha adil, demokratik ve ekolojik bir dünyada yaşamak adına katkı sunmayı amaçlıyorum. Ekolojinin adalet, sağlık, toplumsal cinsiyet, sürdürülebilirlik, demokrasi, insan hakları, siyaset ve ekonomiyle olan kaçınılmaz bağına bireylerin çevre kirliliği ile olan çok katmanlı ilişkisini anlayabilmek adına daha çok vurgu yapılması gerekiyor.

Gelecekte, Dilovası'nda çevre adaleti hareketinin ortaya çıkışını bastıran daha geniş ilişkileri içeren akademik çalışmalara ihtiyaç duyulmaktadır. Kirletilmiş topluluklarda yaşayan bireylerin kirlilikle kurdukları çok katmanlı ilişkileri daha görünür kılmak ve çevre kirliliğinin yoğun olarak yaşandığı bölgelerde, bireylerin kirletilmiş bölgelerde yaşamaya devam etmesinin arkasındaki farklı motivasyonları ve bu motivasyonlara yol açan çeşitli ilişki ağlarını anlamak ve ortaya çıkarmak adına daha fazla akademik çalışmaya gereksinim vardır.

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