POLITICAL ECOLOGY OF INTER-BASIN WATER TRANSFERS IN TURKEY: THE CASE OF MELEN STREAM

by

Çisem Kırcı

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APPROVED BY:

Assist. Prof. Dr. Cem İskender Aydın . . . . . .
Thesis Advisor

Assist. Prof. Dr. Özlem Aslan . . . . . .

Assist. Prof. Dr. İrem Daloğlu Çetinkaya . . . . . .

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ABSTRACT

POLITICAL ECOLOGY OF INTER-BASIN WATER TRANSFERS IN TURKEY: THE CASE OF MELEN STREAM

Istanbul, Turkey's cultural and economic capital with around 20 million residents, uses resources, particularly water, from far beyond its borders. Even though the city has always had trouble providing fresh water to its citizens, its current size necessitated a number of costly solutions to meet the growing demand, some of which took the form of inter-basin water transfer projects, such as the "Great Melen Project", the second-biggest water transfer project in the country. The project forced the evacuation of a number of villages expected to flood, by using urgent expropriation decisions. This thesis focuses on Ortaköy village, evacuated in 2014, by conducting a series of in-depth interviews with various stakeholders, especially with former residents of the village, to learn more about how this project has affected people's lives in the area. The findings demonstrate how, despite the project being hailed as a technological and engineering marvel, the Melen region is being sacrificed—and quite easily—for the sake of the nation's economic growth ideals (embodied in the image İstanbul), and how these ideals are used form consent among the villagers.

ÖZET

TÜRKİYE'DE HAVZALARARASI SU TRANSFERLERİNİN POLİTİK EKOLOJİSİ: MELEN ÇAYI ÖRNEĞİ

Türkiye'nin kültürel ve ekonomik başkenti olan ve yaklaşık 20 milyonluk nüfusuyla İstanbul, sınırlarının çok ötesindeki kaynakları, özellikle de suyu kullanmaktadır. Şehir, sakinlerine temiz su sağlama konusunda her zaman sorun yaşamış olsa da, mevcut büyüklüğü, artan talebi karşılamak için bir dizi maliyetli çözüm gerektirmiştir; bunlardan bazıları, ülkenin ikinci büyük su transfer projesi olan "Büyük Melen Projesi" gibi havzalar arası su transfer projeleri şeklinde ortaya çıkmış durumdadır. Proje kapsamında büyük kamulaştırmalar yapılmış ve sular altında kalması beklenen köyler boşaltılmıştır. Bu tez, 2014 yılında boşaltılan Ortaköy köyüne odaklanmaktadır. Başta köyün eski sakinleriyle olmak üzere çeşitli paydaşlarla bir dizi derinlemesine görüşme yaparak, bu projenin bölgedeki insanların hayatlarını nasıl etkilediği hakkında daha fazla bilgi edinmeyi amaçlamaktadır. Bulgular, projenin bir teknoloji ve mühendislik harikası olarak gösterilmesine rağmen, Melen Çayı etrafındaki alanın (İstanbul imgesinde somutlaşan) ülkenin ekonomik büyüme idealleri uğruna nasıl kolayca feda edildiğini ve bu büyüme ve gelişme ideallerinin köylüler arasında nasıl rıza oluşturmak için kullanıldığını ortaya koymaktadır.

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
AKP	Justice and Development Party (Adalet ve Kalkınma Partisi)
DSİ	Directorate General for State Hydraulic Works (Devlet Su İşleri Genel Müdürlüğü)
EIA	Environmental Impact Assessment
GAP	Southeastern Anatolia Project (Güneydoğu Anadolu Projesi)
HPP	Hydroelectric Power Plant
IBT	Interbasin Transfer
İSKİ	Istanbul Water and Sewage Administration (İstanbul Su ve Kanalizasyon İdaresi)
KOP	Konya Plain Project (Konya Ovası Projesi)
TOKİ	Housing Development Administration of the Republic of Turkey (Türkiye Toplu Konut İdaresi Başkanlığı)
TÜBİTAK	Scientific and Technological Research Council of Turkey (Türkiye Bilimsel ve Teknik Araştırma Kurumu)
TÜİK	Turkish Statistical Institute (Türkiye İstatistik Kurumu)

1. INTRODUCTION

Istanbul, the cultural and economic capital of Turkey with around 20 million residents, is using resources, particularly water, from far beyond its borders. According to the data published by TÜİK (Turkish Statistical Institute) in 2023, the population of Istanbul has reached 15 million 650 thousand 924 people and approximately 19% of Turkey's population lives in Istanbul. Even though the city has always had trouble providing fresh water to its citizens since the Byzantine period (Kentel, 2019), its current size in population necessitates several costly solutions to meet the growing demand. Some of these took the form of inter-basin water transfer projects, such as the "Great Melen Project", the second-biggest water transfer project in the country. The project is designed to provide water to Istanbul from more than 150 km away, for the 21st century and beyond, from the Melen Stream which forms the provincial borders of Düzce and Sakarya.

The first phase of the project started in 2001, when part of the water in the Melen Stream was diverted through tunnels and pipelines to the Asian side of Istanbul – which started to supply the water requirement of the Asian side. In the next phase, the water was diverted into the Boğaziçi Tunnel running below the Bosphorus and was connected to the water infrastructure grid on the European side, as well. It is estimated that water transfer through this tunnel is around 2.8 million m^3/day. The Melen Dam, which is planned to be built in the second phase of the Melen Water Project, was planned to be completed in 2016, but when we come to 2024, the dam has not been completed yet.

Inter-basin water transfers, according to Sjömander Magnusson (2005), serve as an example of how "predatory" metropolitan areas are. The lack of an integrated approach in the planning, design, and implementation of these inter-basin projects frequently results in the poor bearing the majority of the environmental and social burdens, which can lead to conflicts between different users and potentially harm the environment and livelihoods. These inter-basin projects frequently fail to address the competing interests and disproportionate distribution of costs and benefits, which can cause conflicts between different users and potentially harm the environment and livelihoods (Islar and Boda, 2014). As expressed in the local newspapers of Sakarya, the project is presented to the villagers as the "Melen Project will solve Istanbul's water shortage".

The Project forced the evacuation of several villages expected to flood, by using urgent expropriation decisions—a procedure designed to be used in extreme circumstances such as war or natural disasters. Nine years after the evacuation of the villages, in 2024, the dam is still not operational. This thesis focuses on Ortaköy village, evacuated in 2014, by conducting a series of in-depth interviews with various stakeholders, especially with the village's former residents, to learn more about how this project has affected people's lives in the area. In that regard, the imbalance of power for the decision-making and the disproportionate distribution of impacts of this project is examined.

Preliminary data was collected through interviews with members of the Ortaköy Archive Facebook group, which is an online group that creates space for villagers to share memories and update their old neighbors. Noteworthy interviews were conducted with middle-aged male and female participants. The participants highlighted the construction of housing projects by the government intended for the displaced locals, which were later attempted to be sold rather than allocated to them. Despite these disruptions, approximately 60% of the hazelnut orchards were cut down; however, they are now beginning to regenerate, with villagers resuming hazelnut collection. Although the area is still impacted by the Melen Dam's paused construction, this regrowth indicates a progressive restoration of the natural environment. The residents' homes and means of subsistence are still up the air due to the unfinished dam.

Additionally, during a site visit to the area in June 2024, initiated by an invitation from the administrator of the Ortaköy Archive Facebook group and a local journalist, further insights were gathered. The journalist repeated the villagers' feelings of injustice, which are made worse by the dam's incomplete state, and expressed worries about the fairness of the expropriation pricing. Despite the disruption, if the dam had been completed, it could have a recreational area for the community. For the further resources, quotes were collected from five different stakeholder groups as Government, Experts, Local Residents, Media Representatives and Local Government of Istanbul, and open sources such as video news and newspaper archives are used.

The findings demonstrate how, despite the project being hailed as a technological and engineering marvel, the Melen region is being sacrificed—and quite easily—for the sake of the nation's economic growth ideals (embodied in the image İstanbul), and how these ideals are used form consent among the villagers. Due to the lack of communication and the poor management of the Project caused by the governmental bodies, many of the displaced villagers received

compensation for their losses in the short-term, and long-term effects are overlooked. The quotes were analyzed according to the environmental justice dimensions such as distributional justice and procedural justice. These findings highlight the multifaceted impact of development projects on rural communities, revealing a complex scenario of displacement, livelihood disruption and environmental regrowth.

The thesis includes six chapters. The following chapter after the introduction consists literature review which first gives a brief overview of the political ecology of the water and environmental and water governance in Turkey with the addition of short historical account and overview of inter-basin water transfer projects and politics urban water infrastructure and state-led projects. Next, in the third chapter, water related management and water supply systems are examined for Istanbul, with a deeper discussion on the role and importance of the Great Melen Project for the city.

In the fourth chapter, the selected case of Ortaköy village is presented, together with the methodology. The quotations were gathered from five stakeholder groups and categorized based on environmental justice dimensions. With the desktop research, both online and on-site interviews were conducted with selected stakeholders and experts, including in-depth interviews lasting approximately one hour each. Open-source archives, including local newspapers and video news, were examined in order to understand stakeholder perspectives. Additionally, in June 2024, a field visit was conducted in the Melen region, including trips to Ortaköy, the Melen Dam, and the İSKİ regulator sites.

In the fifth chapter, the quotations around the Great Melen Project and Ortaköy is discussed in detail within an environmental justice framework. The gathered quotations are classified under two procedural and distributional justice dimensions. Problems with economic distribution were brought about by the residents' forced relocation and the seizure of their agricultural land. Furthermore, it appears that one of the primary underlying causes of the residents' under-representation and lack of engagement in decision-making processes is the failure to recognize their rights. The last chapter concludes the thesis, by showing how the project generated several ecological distribution problems, exemplified by the destruction of natural and agricultural areas, particularly caused by the processes involved in the dam's construction.

2. POLITICAL ECOLOGY OF WATER INFRASTRUCTURES

2.1. Political Ecology of Water

Political ecology is an interdisciplinary field that focuses on the political, cultural and social relationships surrounding environmental issues; with a focus on understanding power dynamics and governance structures in shaping ecological decisions on resource extraction, land use, pollution levels (Martinez-Alier et. al., 2010). The people who participate in political ecology and the narratives they provide are what holds the political ecology together (Robbins, 2012).

According to Robbins (2012), political ecology research has demonstrated five dominant theses: degradation and marginalization, conservation and control, environmental conflicts, environmental subjects and political objects and actors. While political ecology has relative to allied fields in nature-society studies (Perreault, et. al, 2015), it does not ignore the political actors in the environmental issues. Problems like deforestation, “resource wars”, and climate change are related to the role of capitalism, colonialism, and state policies for natural resources and vulnerable communities (Perreault et. al., 2015).

The political ecology of water, in turn, examines the power dynamics and socio-environmental issues surrounding water resources and how social, political and economic actors influence who has access to and control over water resources. The unequal distribution of water resources is caused by multinational corporations controlling water resources for large-scale agriculture, manufacturing, or even tourism (Cole, 2012), leaving local communities without access to clean water for their needs. These conflicts are not only about water scarcity but give an opinion on governance and justice issues. The emergence of water conflicts is linked to changes in the availability of water in the quantity and quality desired by the powerful (Johnston, 2003). Societies usually struggle not only against dams and water transfers but also against mines and industrial agriculture that grab water from the villagers (Rodriguez-Labajos & Martinez-Alier, 2015).

The political ecology framework also emphasizes the relationship between environmental changes and water governance interaction. For instance, while climate change poses a threat to freshwater resources, economic development has had the most profound impact on the quality and availability of water (Johnston, 2003). Over the decades, urbanization and economic activities have led to the loss of wetlands in the world and severe pollution in 50% of its lakes (Johnston, 2003).

While dams and economic development have increased short-term water availability to some communities, they have simultaneously led to substantial environmental degradation and ecological challenges.

By framing water as a contested resource, the political ecology perspective offers critical insights into pathways for more equitable and sustainable management (Budds, 2004). It promotes politicies that strike a balance between ecological issues and human needs and calls for participatory approaches that include the perspectives of local communities. By doing this, it not only reveals the root causes of water scarcity but also helps to imagine new solutions that put justice and resilience first (Budds, 2004; Johnston, 2003). In the 21st century, this framework remains an essential tool for addressing the complex problems associated with water governance.

2.2. Water Politics and Power Dynamics in Environmental Governance in Turkey

The institutions, policies and procedures used to manage its natural resources and to address environmental issues are together referred to as environmental governance. In Turkey, especially after 1980s, with the increase in industrialization and environmental awareness, the concept of environmentalism began to gain traction (Harris & Işlar, 2014). In 1983, Environmental Law entered into force with the statement of "to ensure that the environment, which is the common existence of all living things, is protected in accordance with certain legal and technical principles in line with economic and social development goals".

As many scholars put forth, the environmental governance in Turkey has a rather top-down and centralized nature (see, for instance, Harris & Işlar, 2014, Adaman et al, 2016, Aydın, 2019 among others). The Ministry of Environment, Urbanization, and Climate Change is the primary body responsible for implementing environmental policies in Turkey. Other ministries, such as the Ministry of Agriculture and Forestry also play an important role in special areas like forestry, water resources, and agricultural impacts on the environment. Under the Ministry of Agriculture and Forestry, Directorate General of State Hydraulic Works (DSİ) is founded. DSİ is responsible for planning, management, development and operation of water resources, flood protection, expanding irrigated agriculture, producing hydroelectric energy and supplying drinking water to the cities as well as provide drinking water to settlements with municipal organizations. DSİ continues its priority activities on dam works, which are the common point of the objectives mentioned and works with local governments and municipalities which have responsibilities for local environmental issues,

including waste management and pollution control in the municipalities. Environmental Impact Assessments (EIA) are required for the certain projects to evaluate their potential impacts on the environment.

In Turkey, economic growth is prioritized at the expense of environmental health and social equity and it refers to the strategy of the Turkish state (Adaman et al, 2016). State promotes rapid economic growth and industrialization through government intervention and planning. Large-scale infrastructure projects such as the Southeastern Anatolia Project (GAP) and the desire for building dams and HPPs, have been a representative approach for the development-oriented policy of the state. These projects, while increasing water storage and hydroelectric capacity, have also created significant environmental and social disruptions (Erensü et. al., 2016).

Countries with an annual usable water amount per capita of more than 10,000 m^3 are considered water-rich. If the annual freshwater amount per capita in a country is less than 1700 m^3, that country is considered to be facing "water pressure", and if the said amount falls below 1000 m^3, it is considered to be facing a "water deficit" (Boelee, 2011). When these criteria are taken into consideration, Turkey is among the countries with water deficit with an annual usable water amount of 1500 m^3/capita. The annual total of our country's consumable surface and groundwater potential is 112 billion m^3 and a total of 54 billion m^3 of this water is used annually (Kalkınma Bakanlığı, 2018). When examined sectorally; 40 billion m^3 (74%) is used in irrigation, 7 billion m^3 (13%) as drinking-usage water and 7 billion m^3 (13%) in industry (Kalkınma Bakanlığı, 2018). In Turkey, 27% of the population lives in water scarce areas in 2020, and this rate is expected to increase to 30% in 2030 – when the population will reach to nearly 90 million in 2030 and the available water will drop from 1,350 m^3 to 1,240 m^3 per capita per year (SUEN, 2021; Water Scarcity Clock, n.d.). Considering that Turkey is a water deficit country, the fact that it has not yet enacted a Water Law can be considered as a major problem. Turkey adopted Five-Year Development Plans starting from the 1960s. These plans gave a broad view of prioritized economic growth, industrialization, infrastructure developments. Twelfth Development Plan for 2024-2028 is approved in 2023. It is stated in the Development Plan that "The water law will be enacted for effective water resources management" (Twelfth Development Plan, 2023).

Water governance in Turkey is also carried out in a rather top-down fashion, as in environmental governance. While DSI, General Directorate of Water Management, General Directorate of Environmental Management, İller Bankası, Provincial Special Administrations and similar

institutions play a role in the management and development processes of water assets in Turkey, farmers, Water User Associations and other water consumers mostly take part in the usage phase and have little say in how the water resources should be managed. Figure 2.1 showcases the current water governance scheme in the country.

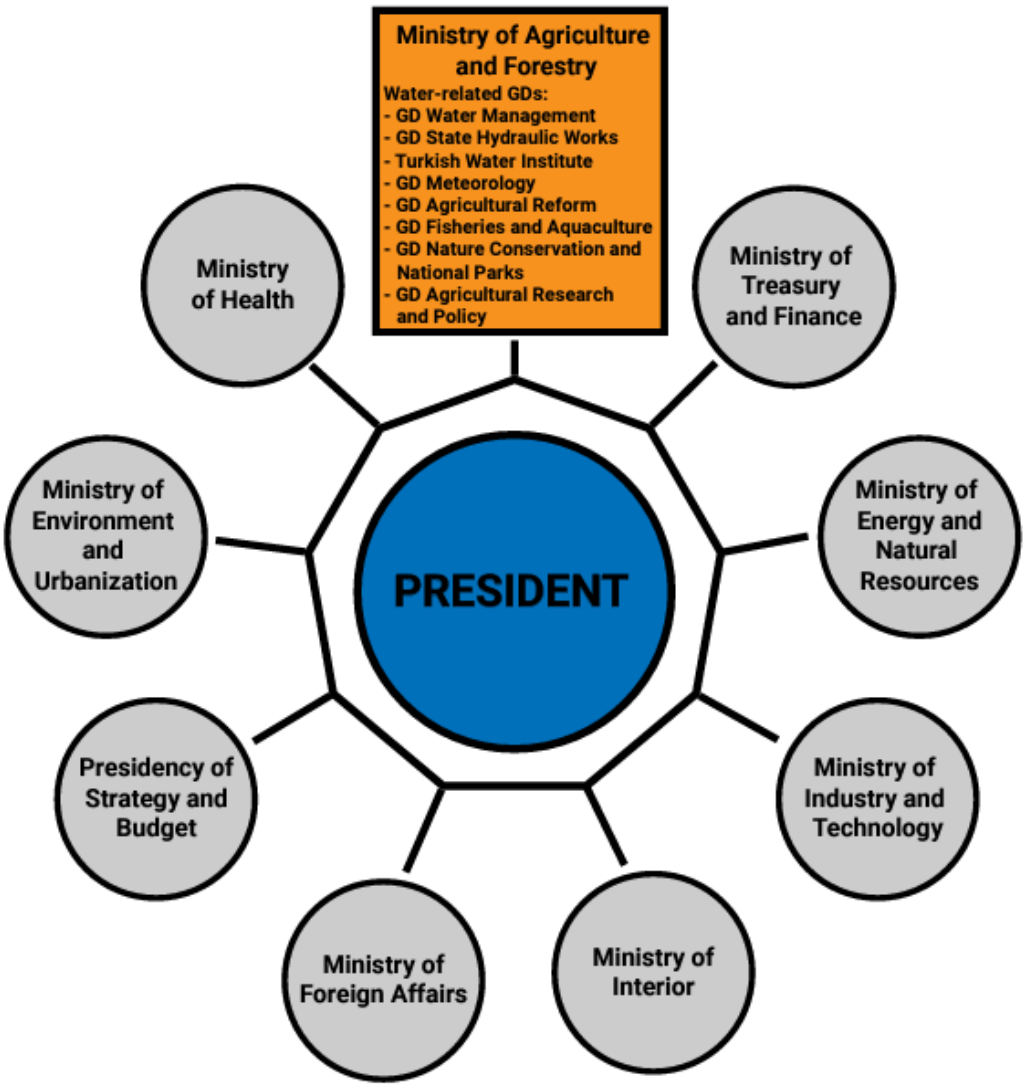

Figure 2.1. Authorities in Water Governance in Turkey. (SUEN, 2021)

Ministry of Agriculture and Forestry is the leading institution in special areas like forestry, water resources, and agricultural impacts on the environment. The ministry is primarily mandated to ensure "coordination of water management, prepare river basin management plans, develop measures and set objectives and environmental standards for the management and protection of water environment and devise strategy and policies for flood risks by preparing flood management plans" (SUEN, 2021).

Under the Ministry of Agriculture and Forestry, Directorate General of State Hydraulic Works (DSİ) is founded. DSİ is responsible for planning, management, development and operation of water resources, flood protection, expanding irrigated agriculture, producing hydroelectric energy and supplying drinking water to large cities as well as provide drinking water to settlements with municipal organizations. DSİ continues its priority activities on dam works, which are the common point of the objectives mentioned and works with local governments and municipalities which have responsibilities for local environmental issues, including waste management and pollution control in the municipalities. Environmental Impact Assessments (EIA) are required for the certain projects to evaluate their potential impacts on the environment.

Ministry of Environment, Urbanization and Climate Change is responsible for the protection and improvement of the environment. Its responsibilities include establishing principles and policies, developing criteria and standards, and designing programs to prevent and address environmental pollution; also coordinating body for climate change negotiations and overseed adaptation and mitigation strategies (SUEN, 2021). The Bank of Provinces (İlbank), affiliated to the ministry, meets the financing needs for investments of the local administrations (SUEN, 2021).

The Ministry of Health plays a key role in ensuring the quality of drinking and bathing water, contributing to public health protection and improvement. Meanwhile, the Ministry of Energy and Natural Resources is tasked with safeguarding and advancing geothermal resources and natural mineral waters, as well as collaborating with the State Hydraulic Works (DSİ) to develop hydropower projects. Ministry of Foreign Affairs is the leading authority in the coordination of issues related to transboundary waters (SUEN, 2021). Ministry of Interior has power of tutelage over local governments and has the authority to administratively audit local governments in case of malpractices. Special Provincial Administrations affiliated with the ministry is responsible for water supply to non-metropolitan rural areas. Another agency under the ministry, the Disaster and Emergency Management Authority (AFAD), in collaboration with DSI, is responsible for flood response (SUEN, 2021). Ministry of Industry and Technology plays an important role in industrial water and wastewater management given that the share of industrial water demand in total consumption amounts to 13% (SUEN, 2021). Presidency of Strategy and Budget is the leading organization in the preparation of the national investment program and allocation of central budget financial sources (SUEN, 2021).

The water infrastructure projects in Turkey are driven by the state's ambition to accelerate economic growth and urban expansion. This approach can be seen in mega-projects like Southeastern Anatolia Project (GAP) and inter-basin water transfer projects such as the Great Melen Project. These studies underscore the unequal distribution of resources, with urban centers are prioritized over rural areas. The Turkish government had followed a development of a "national economy" in the early twentieth century (Buğra, 2017). State-owned enterprises were founded to lead industrial sectors to show the young republic as modern and reformist state. According to this policy, Istanbul, Ankara and Izmir have seen significant industrial and economic growth with attracting both domestic and foreign investors. With the rapid urbanization and the development of industrial and economic zones, the population has significantly increased in these cities.

With this developmentalist policy, infrastructural investments such as roads, bridges, dams, and various power plants have been central and state-led investments. After the liberalization of the market in 1980s, the state-led investments shifted into the private sectors. The construction sector became one of the most important components in Turkey which leds to constructing mega projects such as the third airport, urban transformation, third bridge and Kanal Istanbul projects (Cengiz et. al., 2019). The developmentalist policies cause to emerging environmental issues, such as deforestation, pollution and biodiversity loss, especially in the infrastructural project zones. These areas rich in natural resources then becomes environmental sacrifice zones, suffering from pollution and environmental degradation. Especially near and around Istanbul, the areas are designated to provide material, water, and energy to the city centers.

According to this policy, the development of water infrastructure has also been impacted by Turkey's extremely centralized system of government. There is less opportunity for local governments or community involvement in the development and implementation of water projects due to the State Hydraulic Works' (DSİ) dominant role and the privatization of mega-projects. Islar (2012) highlights that this top-down approach limits the incorporation of the privatization of water use rights and has led to the dispossession of local communities by changing the regimes of entitlements to the use of water resources – in rivers in this case. Considering social and environmental costs are disregarded, this exclusion not only makes social inequality more intense but calls into question the long-term viability of the initiatives.

2.3 History and Practices of Inter-Basin Water Transfers

2.3.1 Inter-basin Water Transfer Projects in the World

Interbasin water transfer (IBT) projects, which involve diverting water from one river basin to another, are often implemented to address water scarcity and to support agricultural, industrial, and urban development. These projects are typically justified on the grounds of balancing uneven water distribution across regions. Globally, notable projects include China's South-to-North Water Diversion Project, which channels water from the Yangtze River Basin to northern regions facing acute water shortages, and India's National River Linking Project, designed to connect 14 Himalayan and 16 peninsular rivers to improve irrigation and drinking water availability (Ghassemi and White, 2007).

The ecological impacts of IBT projects are profound, often leading to alterations in river ecosystems, loss of biodiversity, and changes in water quality. For example, the diversion of rivers can reduce downstream flows, affecting wetlands, fisheries, and riparian habitats. These ecological disruptions have long-term consequences for regional sustainability. Furthermore, IBT projects frequently exacerbate socio-political tensions, particularly in regions where water resources are shared across borders. Disputes over water rights and allocation between donor and recipient basins can lead to conflicts, complicating cooperative water governance. While IBT projects offer a technological solution to water scarcity, their implementation highlights the need for integrated, equitable, and sustainable approaches to water resource management (Wang et. al, 2016).

Additionally, the dam construction has been promoted as a solution to reinforce water supplies for irrigation (Johnston, 2003). The World Commission on Dams' performance reports show serious inadequacies in meeting irrigation targets and seen that 20% of the irrigated fields of the 52 dams had waterlogging or salinization, and irrigation's overall contribution to the world's food supply is still just 12-16%, significantly less than the one-third statistic that the supporters sometimes point to (Johnston, 2003). Centralized and privatized approaches to water resource management shift control from local communities to external authorities. This process transforms water from a vital part of traditional ways of life into an economic commodity prioritized for national and global markets. As water becomes commodified, its use shifts away from meeting household and local needs toward serving broader economic goals (Johnston, 2003). Decision-makers and the people directly impacted

by them become estranged due to this centralization, which raises the possibility of local conflicts and crises and alienates the environment.

China's South-to-North Water Project is launched in 2002 as a mega-project and links four of the seven major rivers in China and affects one-third of the landmass of China, with 36 billion USD invested (Zhang, 2009). According to Yan et. al. (2023), reduced water flow in donor basins changes aquatic habitats, and physicochemical characteristics, and may result in saltwater intrusion, therefore integrated management is required to strike a compromise between ecological preservation and water allocation; while as recipient basins benefit from restored water sources for ecological, agricultural, and residential purposes, which lessens their need on groundwater and prevents land subsidence. Precipitation and water distribution in both basins are becoming more variable due to climate change, which makes planning diversion more difficult and highlights the necessity for robust, adaptable solutions to survive climate extremes (Yan et. al, 2023). These difficulties highlight the need for integrated planning, ecological preservation, and close observation in inter-basin water transfer projects.

The project has economic benefits to Beijing, water management social security and social organization sectors have the most economic benefits (Gao & Yu, 2018). While the South-to-North Project has economic benefits to Beijing, the project is seen as utilitarian and technocratic and creating inter-jurisdictional conflicts in upstream and downstream regions (Wang et. al., 2016). These inequalities result from the state's legal and technological redistribution of water rights, which frequently undermines the legitimacy of compensation claims made by disadvantaged stakeholders (Wang et. al., 2016).

Another notable example with significant ecological and socio-economic implications is Brazil's Sao Francisco River Interbasin Project. The project is designed to transfer water from the Sao Fransisco River basin, the primary water source in the northeast region of Brazil, to the smaller basins in the dry areas (de Andrade et. al, 2011). The project is started in 2007 for the Programme for the Acceleration of Growth and aims to provide fresh water to 12 million people and enhance the Northeastern hydraulic network's synergy (Roman, 2017). However, the project faced delays and the cost has risen from 4.5 billion USD to over 10 billion USD (Roman, 2017).

The fact that the failure to complete the Sao Francisco River Interbasin Project has led to water insecurity among the people in the semiarid region, criticism of the Lula government's development

policies, the desire to meet the demands of the political and economic elites, and the alienation of the social base (Roman, 2017). Santos and Ioris (2024) analyze the case with a hydrosocial perspective, and states that the project has failed to address structural issues such as wealth concentration and inadequate political representation in the region, leaving the rural population without meaningful water security which exacerbates their marginalization.

2.3.2. Water Transfer Projects in Turkey

Turkey has implemented numerous inter-basin water transfer projects. I will provide a brief overview of the most notable ones, as The Southeastern Anatolia Project (GAP), Konya Plain Project (Konya Ovası Projesi, KOP), The Kızılırmak-Ankara Water Transfer Project, and the Büyük Menderes Basin Transfer Project. Following this, I will delve into the Great Melen Project, the central focus of this thesis, in a dedicated section.

GAP: The Southeastern Anatolia Project (GAP) is a large-scale regional development project covering nine provinces in the southeast of Turkey (Adıyaman, Batman, Diyarbakır, Gaziantep, Kilis, Mardin, Siirt, Şanlıurfa and Şırnak) targeting agriculture, energy, water resources and social development. GAP, one of Turkey's largest infrastructure projects, started in the 1970s, aims to increase the economic potential of the region, improve living conditions and reduce regional development disparities across Turkey. The aim is to produce hydroelectric energy on the Euphrates and Tigris rivers and irrigate agricultural lands through the Atatürk Dam and other dams. These dams provide energy production, which constitutes a significant part of Turkey's hydroelectric potential. GAP has implemented a comprehensive water management system that includes 22 dams and 19 hydroelectric power plant projects (Bilgen, 2017). Water is transferred to several basins for agriculture, such as with the Şanlıurfa Tunnels, where the water is transferred to the Harran Plain from the Atatürk Dam on the Euphrates River, Mardin-Ceylanpınar irrigation channels, and planned Babakaya Tunnel where the water will be transferred from the Silvan Dam to Diyarbakır plains (Anadolu Ajansı, 2019; 2023).

KOP: Konya Plain Project (Konya Ovası Projesi, KOP) is Turkey’s second largest agricultural development and the irrigation project that aims to solve agricultural irrigation problem in Konya Closed Basin. The main objective of the project is to increase agricultural ptoduction in the region, efficient water usage and improve sustainable agriculture practices. It has been stated that KOP will be a solution to the problems due to the difficulties in agricultural activities of Konya Plain, known

as the granary of Turkey, due to drought, excessive use of underground water resources and climate change[1]. The project includes mega infrastructure investments such as the Blue Tunnel (Mavi Tünel) to improve water management in the region which is a project to transfer water from the Göksu basin with the Tunnel. With the completion of the Blue Tunnel project, 100 million m3 of the annual 414 million m3 of water to be transferred to the basin has been allocated to Konya province as drinking water. After the completion of the Blue Tunnel Project, it will be possible to irrigate 65 thousand hectares of agricultural land with surface water resources with the remaining 314 million m3 of water (KOP Eylem Planı 2021-2023).

Kızılırmak-Ankara Water Transfer Project: The Kızılırmak-Ankara Water Transfer Project is a major infrastructure initiative designed to address water scarcity in Ankara, Turkey's capital. Faced with rapid urbanization and increasing water demand, the city struggled to secure a sustainable water supply. The project involves transferring water from the Kızılırmak River, located approximately 130 kilometers from Ankara, through a series of pipelines and pumping stations (Islar and Boda, 2014). Despite its significance, the project has faced criticism due to the high costs of construction and operation, as well as concerns about the quality of water from the Kızılırmak River, which requires extensive treatment due to salinity and pollution. Nonetheless, it represents a critical step in Ankara's strategy to enhance its water security (Karakaya et. al., 2014).

The Büyük Menderes Basin Transfer Projects are part of Turkey's broader effort to optimize water resource management in the Aegean region, which faces challenges of water scarcity and agricultural demand. The basin, one of Turkey's major river systems, is central to agricultural productivity but has been under pressure from overuse, pollution, and climate change. Transfer projects aim to redistribute water resources within the basin and from adjacent basins to ensure a more equitable and sustainable water supply for both urban and rural areas. These projects often involve constructing dams, reservoirs, and pipelines (T.C. Tarım Orman Bakanlığı, 2023).

2.3.3. The Great Melen Project

The Great Melen Project (Büyük Melen Projesi) is an inter-basin water transfer project from Melen Stream (forming the provincial borders of Düzce and Sakarya) to Istanbul. It is designed to provide water to Istanbul for the 21st century and beyond. With the completion of the last phase of

[1] http://www.kop.gov.tr/

the dam project, it aims to deliver around 1 billion m^3/year of water (Kalkan and Yanık, 2004). The project has four stages:

1. To construct a regulator on the Melen Stream and convert the flow rate of 8.5 m^3/s (268 million m^3/year), to transfer water transmitted to the 720,000 m^3/day capacity Treatment Plant with a pump and 185 km pipe and tunnel system to the European side via the Boğaziçi Water Tunnel.
2. To transfer 307 million m^3 of water per year with the Büyük Melen Dam and the second pipeline; Pump capacity will be increased and a new treatment plant will be constructed.
3. To transfer 307 hm^3 of water per year with the third pipeline; Increase pump capacity and addition of a new treatment technology.
4. Additions to pump stations, treatment plants (800,000 m^3/day additional capacity) and energy supply system for additional 308 hm^3 of water transmission (Gerek, 2008).

In the first stage of the project which started in 2001, part of the water in Melen Stream was diverted through tunnels and pipelines to the Ömerli Dam in the Asian side of İstanbul. In the second stage, the water was diverted into the Boğaziçi Water Tunnel running below the Bosphorus and was connected to the water infrastructure grid in the European side, as well. It is estimated that water transfer through this tunnel is around 2.8 million m^3/day. The Melen Dam, which is planned to be built in the second phase of the Melen Water Project, was planned to be completed in 2016, but when we come to 2024, the dam has not been completed yet (Dünya Gazetesi, 2012).

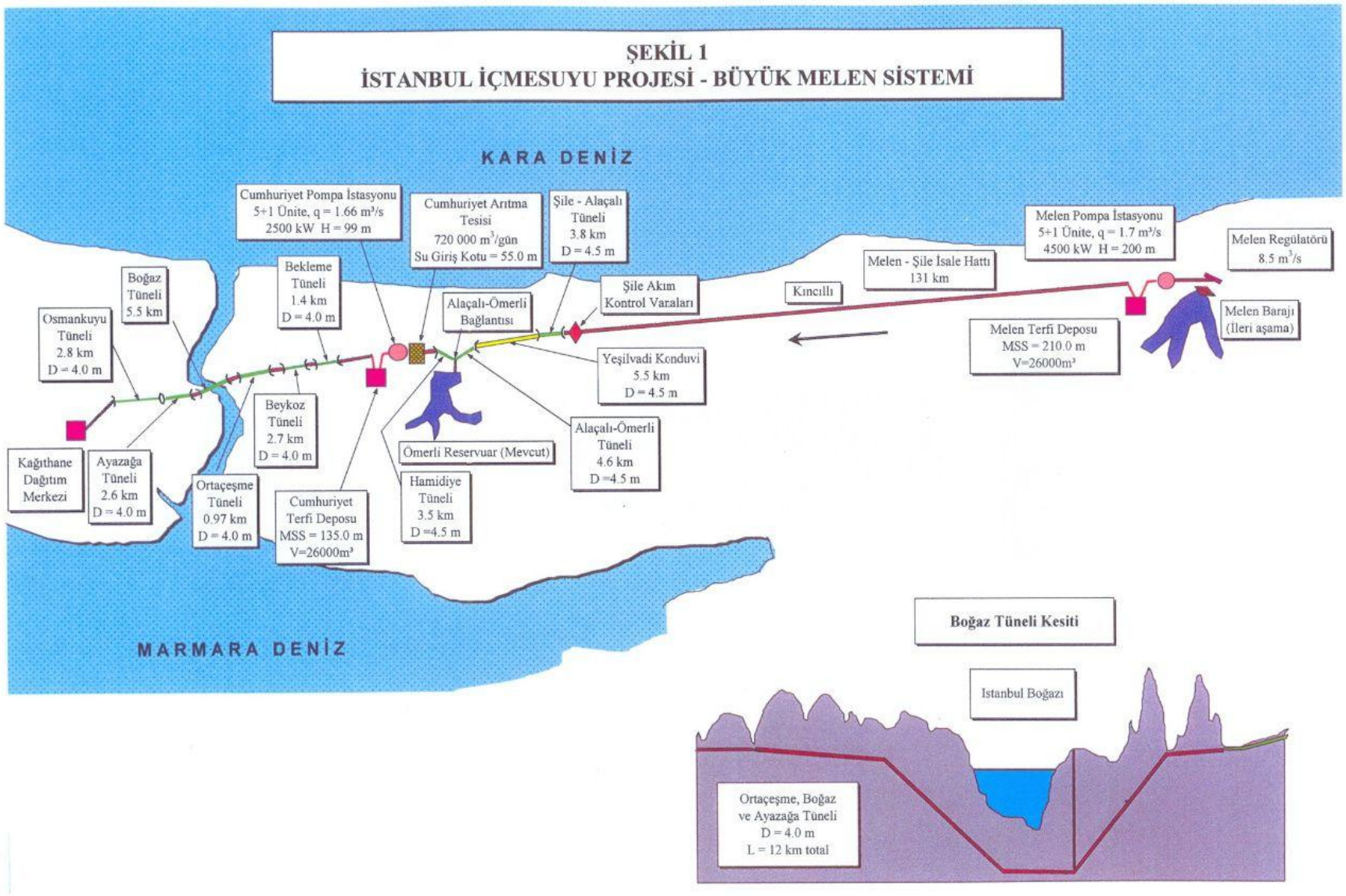

Figure 2.2. Great Melen Project. (Suyapı, n.d)



Figure 2.3. The opening of the Boğaziçi Water Tunnel by the then Istanbul Metropolitan Municipality a) Mayor Kadir Topbaş, DSI Regional Director Yalçın Çamoğlu, and İSKİ General Director Ahmet Demir in 2012 (Anadolu Ajansı, 2012).b) Prime Minister Recep Tayyip Erdoğan in the same tunnel (NTV, 2009)

In 2006, Hilmi Güler, the Minister of Energy and Natural Resources of the period, made a statement saying that the Melen Dam, which will be implemented within the framework of the Water Supply Project to Istanbul, will meet the drinking water needs of Istanbul until 2040. The projected population of Istanbul in 2040 was 17 million at the beginning of the project According to the data published by TÜİK in 2024, the population of İstanbul became 15 million 655 thousand 924 people, which makes the city where 18.34% of Turkey's population lives. Prof. Dr. Veysel Eroğlu, General Director of State Hydraulic Works (DSI) (who later became the Minister of Forestry and Water Affairs in 2011), also stated that the planning of a city's drinking water is not short-term and stated that the project aims to meet the drinking water needs of Istanbul from 2015 to 2040.

In January 2015, After the determination of the location of the dam, Prof. Eroğlu gave information on the subject and said that the groundbreaking ceremony would be held with the participation of then Prime Minister Recep Tayyip Erdoğan. After the foundation was laid, it was said that the dam would be completed in 1,240 days, according to the contract. Speaking at the ceremony, Prof. Eroğlu stated that the Melen Dam will solve Istanbul's water problem until 2071. It was said that the Melen Dam would supply 1 billion 77 million cubic meters of water per year, and alone, would meet all the water needs of Istanbul.

With the Prime Ministry Circular No. 2015/5 regarding the Melen Stream Sub-Basin Protection Action Plan in the Turkish Republic Official Gazette, the Melen Stream Sub-Basin Protection Action Plan was published in November 2015. The purpose of the Circular is, as stated, "there are studies carried out by the Ministry of Forestry and Water Affairs in order to protect the water resources in

the country, ensure their sustainable use, prevent pollution and improve the quality of polluted water resources. In the Tenth Development Plan, great importance was given to the protection of the environment and under this heading; “the development of a management system that will ensure the protection, improvement and sustainable use of the quantity and quality of water and land resources” has been determined as the main goal.

One of the villages that has been evacuated in 2014 as a result of an “urgent expropriation” decision is Ortaköy (Lahna) in the Kocaali district of Sakarya. Ten years after the evacuation of the villages, in 2024, the dam has still not been built. Ortaköy residents were forced to evacuate the village by cutting off their electricity (Milliyet, 2014). Even though the electricity cut was protested, the evacuation of the village accelerated. Ortaköy and most of its villagers settled in Karasu. Some of the rest are mainly settled in Adapazarı, Kocaali, Akçakoca, Düzce and İzmit (Milliyet, 2014).

The mayor of Ortaköy Town, Cemal Angın claimed that “Housing Development Administration of the Republic of Turkey (TOKI) would create mass housing in the Caferiye district for individuals residing in the region”. The construction of a dam in the area has been planned since 1973, according to Angın, who added, "TOKI will create houses, but the notifications arrived sooner than intended. The people had previously purchased their homes from Kocaali and Karasu. Some people even replaced to houses in Istanbul for the expropriation price. The hazelnut field is where the citizens prefer to stay until the very last minute.” (Milliyet, 2014). The project is presented to the public as "Melen Project will solve Istanbul's water shortage". In a local newspaper, it was stated that “Düzce should be a district of Istanbul and should be integrated with Istanbul. Istanbul will decide the growth of Düzce, and Istanbul will consume its water.” (Düzce Postası, 2013). Even Ortaköy Town Mayor Cemal Angın expressed their honor for meeting Istanbul's water load (Anayurt Gazetesi, 2011).

On October 19, 2019, Istanbul Metropolitan Municipality Mayor Ekrem İmamoğlu examined the Melen Dam and Hydroelectric Power Plant. Imamoglu's visit brought up the fact that the project stopped due to cracks in the dam body. Currently, the Melen Dam project is still unfinished and many related issues have not received enough attention in the public discourse. The delay and difficulties reveal a latent conflict beneath the surface that deserves further analysis. To emphasize the crucial importance of the Melen Dam to Istanbul, its function in providing water to Istanbul will be discussed in detail in Section 3.4. Role of the Great Melen Project in Istanbul.

2.4. Politics of Urban Water Infrastructures

2.4.1 Infrastructure as a Tool of Power and Control

Roads, pipelines, dams, grids, and digital networks are all materially focused on by the politics of infrastructure, which is impacted by power relations and decision-making (Larkin, 2013). Infrastructures enable other materials to move, although political infrastructure recognizes these technological advancements embedded in social, economic, and political contexts (Larkin, 2013). By determining who gets the materials to use and at what cost, infrastructure becomes a means of controlling societies, often reflecting the priorities of who holds power rather than the needs of marginalized communities (Swyngedouw et. al., 2002).

Urban water distribution relies on large-scale infrastructure because it is both economically advantageous and easier to regulate (Trowsdale et. al., 2020). However, the processes involved in deciding the location and construction of dams, irrigation systems, and water pipelines have faced significant criticism for perpetuating unequal access to water and exacerbating existing social disparities (Meehan, 2013). As a consequence, the distribution of water favors urban centers and industrial zones as they are key drivers of economic growth, which leaves rural areas and less powerful communities to contend with inadequate supplies (Swyngedouw et. al., 2002). This inequality in resource distribution underscores how infrastructure perpetuates social and economic injustice. The political decision behind the system demonstrates how the resources, in this case it is water, is used to privilege and benefit selected groups, reinforce the power, and even limit oppression (Anand, 2012) while regulating access to a resource that is fundamental to life.

Anand (2012) explores how urban water infrastructure in Premnagar, Mumbai, reflects and reinforces social inequalities. Access to water is restricted to settlers who can prove residency before 1995, tying eligibility to state-recognized property claims that often exclude informal settlers. This exclusion aligns with broader urban policies that privilege bourgeois property norms, marginalizing poorer communities. Premnagar’s residents, denied formal water access, rely on costly and informal alternatives, such as illegal municipal connections or private well networks, highlighting their precarious urban citizenship. These practices are shaped by the biases of municipal engineers, who view these residents as undeserving, labeling them as "dirty" and disruptive to the city’s water system. This exclusion is not incidental but rooted in cultural and political chauvinism that actively

reproduces inequality. The interplay between infrastructure, social identities, and governance reveals how water access is used to enforce belonging and abjection in urban life.

2.4.2. State-Led Mega-Projects and Governance of Water Infrastructure

Flyvbjerg (2014) defines mega-projects as “large-scale, complex ventures that typically cost 1 billion USD or more, take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people.” Water infrastructure is essential to territorial control and state presence, and large-scale infrastructures are frequently used by governments to show that governments are capable of effectively controlling natural resources (Sayan et. al., 2024). Although these initiatives can also be used as instruments of dominance, especially in areas that are disputed, where controlling the water can be used to establish power of suppress opposition (Sayan et. al, 2024). The location of pipelines or dams might affect the power dynamics in the area because upstream users can control or limit the amount of water that reaches downstream populations potentially increasing conflicts.

In many instances, the development of extensive infrastructure projects is tied to the urban sprawl, as expanding urban areas require roads, utilities, public services, and other facilities to support growing populations. When cities spread outwards, large-scale infrastructure projects, such as highways, water lines, electricity grids, and sewage systems, are needed to connect new suburban developments with urban centers. These projects, however, come with substantial financial and environmental costs, as extending infrastructure to low-density areas is often more expensive than maintaining or upgrading infrastructure within existing urban spaces. Consequently, infrastructure projects can both enable and perpetuate urban sprawl, creating a cycle of outward expansion and further infrastructure demand. These public investments, however, frequently place a financial burden on local governments, as maintaining and extending infrastructure over vast areas increases operational costs (Carruthers & Ulfarsson, 2008).

Furthermore, those who are relocated or excluded by the installation of water infrastructure frequently contest it. Such projects are usually opposed by communities that lose access to land or experience environmental deterioration, casting doubt on the development and progress narratives that support them. Because they expose divergent perspectives on resource usage, governance, and justice, these conflicts highlight the political dimension of water infrastructure. In addition to having

an effect on ecosystems and economies, infrastructure shapes access to water and serves as a platform for conflicts about equality, ownership, and power.

Larkin (2013) compares two different studies in his study and analyzes how citizenship and state power are shaped through water distribution, and how infrastructure is not only a technical system but also a part of citizenship and socio-political order. According to Anand (2012), water distribution is not only a technical system with pipes and pumps, but also related to social relations. The daily interactions that people in Mumbai carry out to access water are also affected by this system. In this way, Anand (2012) introduces the concept of "hydraulic citizenship" - in this way, the individual's belonging to the city is defined together with the social and material demands he or she makes on the water infrastructure and access to water is an indicator of physical existence and being a citizen in the city. Von Schnitzler (2008), on the other hand, argues that the water meters and the control carried out by the state are designed to create a new form of citizenship - so that individuals become accountable and responsible citizens if they pay to water. Therefore, meters are not only technical tools but also a management strategy that shapes citizens with a moral language.

According to the analysis of Larkin (2013), infrastructure technologies are not neutral but form the basis of discussions about citizenship and social order. Technologies and infrastructure thus constitute the strategy of governance. In addition to promoting economic growth, infrastructure expenditures also serve as a means for the state to show its citizens how powerful it is (Szabó and Jelinek, 2023). Briefly, infrastructure shapes complex relationships such as citizenship, social justice and state administration through a basic resource such as water. When the social effects of these systems are considered as well as their technical aspects, it is possible to see that infrastructure policies are not neutral, but rather a tool of power and control mechanisms (Szabó and Jelinek, 2023).

3. WATER POLICY AND POLITICS IN ISTANBUL

3.1. Lessons from Water Management in Global Metropolises

Water management in global metropolises is a critical challenge as urban areas expand rapidly, increasing pressure on existing water resources (Zhuang, 2016). Many metropolises are reliant on distant water sources and extensive infrastructure to meet their needs, making them vulnerable to resource depletion, environmental degradation, and geopolitical tensions. Urban water management must balance the competing demands of residential, industrial, and agricultural users while ensuring equitable access and sustainability (Wang et. al., 2018).

Interbasin water transfers have become a prominent strategy to address water shortages. These projects involve transferring water from water-rich basins to drier, urbanized regions through pipelines, canals, and reservoirs. Cities like Beijing, Mexico City and São Paulo depend on such transfers to meet their water demands (Zhuang, 2016; Dyrnes and Vatn, 2005). However, interbasin water transfers are complex, expensive, and often controversial. They can disrupt ecosystems, reduce downstream flow, and create conflicts between regions over shared water resources. While they provide short-term relief, critics argue that IBTs can lead to over-reliance on distant water sources, delaying investments in local water conservation and sustainable practices.

With the China's South-to-North Water Transfer Project (See Section 2.3.1 Inter-basin Water Transfer Projects in the World), metropolises such as Beijing and Tianjin are receiving water (Zhuang, 2016). Zhuang et. al. (2016) states that researchers have noted that the part of Hanjiang River, which is a water source for the middle route for the project, is likely to experience a drop of water levels which can worsen water pollution and decline in fish populations. Also it is stated that Yangtze River may face increased saltwater intrusion due to the operation of the project which can potentially effect Shanghai's water quality (Xu et. al., 2012). Swyngedouw (2004) frame the water transfers as example of unequal power relations, with an understanding the water politics in Guayaquil, Ecuador.

In Brazil, Paraiba do Sul River is connected to the Guandu River in 1913 to aim to generate hydroelectric power for Rio de Janeiro (de Andrade et. al., 2011). However, the project led to significant environmental issues such as poor water quality, conflicts over water rights, environmental

impacts and no assessments were conducted for the communities in the affected regions (de Andrade et. al., 2011).

To conclude, water management in global metropolises present various challenges as urbanization and water quality. Cities like Beijing and Sao Paulo rely heavily on the water transfers, which haver become an important strategy to address urban water scarcity. However, as seen by the examples, the projects frequently come with political, social and environmental costs.

3.2. Istanbul's Water Supply Sytems

Istanbul's water supply system is a complex and sophisticated network designed to meet the needs of its large and rapidly growing population. The system is managed by the Istanbul Water and Sewerage Administration (İSKİ) and is composed of several key components, including local reservoirs, dams, and interbasin water transfer projects. The system faces the unique challenge of securing water in a region that experiences seasonal variations in rainfall and has a growing demand for water due to urbanization and population growth.

Locally, Istanbul relies on a series of reservoirs and dams to store and supply water. Key reservoirs include Terkos Lake, located on the European side of the city, which provides a significant portion of the water supply. Alibey Dam is another important source on the European side, while the Ömerli Dam and Elmalı Dam on the Asian side also play a crucial role in meeting the city's water demand. These reservoirs capture rainfall and runoff, ensuring a stable water supply throughout the year. However, as Istanbul's population continues to grow, local sources alone are no longer sufficient to meet the demand, which has led to the development of additional strategies.

Istanbul is a significant example of uncontrolled urban sprawl, where urban areas expand rapidly and in an unplanned manner into the surrounding rural land, typically resulting in low-density, car-dependent developments. This phenomenon is characterized by the spread of residential, commercial, and industrial zones over large swaths of land, often stretching beyond the limits of traditional cities. Urban sprawl is frequently driven by a combination of population growth, economic expansion, and a desire for more spacious living environments. While this expansion can lead to improved housing and amenities for some residents, it often comes at a high cost to the environment, community cohesion, and public resources. One of the most significant consequences of urban sprawl is its impact on the environment, sprawling developments consume large areas of land, often leading to

deforestation, loss of biodiversity, and the destruction of natural habitats (Rubiera-Morollón & Garrido-Yserte, 2020).

In addition to local reservoirs, Istanbul's water supply is supported by interbasin water transfer projects. One of the most significant of these is the Melen System, which transfers water from the Melen River in the Sakarya Province, located around 170 kilometers east of Istanbul. This system is expected to provide a reliable water source for the city for the foreseeable future. Additionally, water is transferred from the Istranca Streams, located near the Bulgarian border, to further bolster the city's water supply. These interbasin transfers are essential in ensuring that Istanbul has enough water to meet the needs of its population and industries, particularly during periods of drought or high demand (van Leeuven and Sjerps, 2015).

In the case of Melen Stream and Istanbul, urban sprawl has been a critical issue, exacerbated by the city's rapid population growth and increasing demand for housing and infrastructure. Melen Stream, a vital water resource for Istanbul, has faced significant environmental pressure due to unregulated construction, deforestation, and industrial activity in its vicinity. These activities have not only disrupted the stream's ecological balance but also threatened the city's long-term water security. The unchecked spread of urban development into the watershed areas of Melen Stream underscores the urgent need for sustainable urban planning and stringent environmental protection measures in Istanbul (TMMOB Çevre Mühendisleri Odası İstanbul Şubesi, 2020).

Despite these efforts, the city's water supply is increasingly under pressure due to population growth, climate change, and the challenges of managing large-scale infrastructure. The reliance on both local and external water sources has led to concerns about the sustainability and environmental impact of the water system, especially regarding the ecological health of the transfer sources and the potential for conflicts over water resources. Managing this vast water network requires continuous investment in infrastructure, treatment facilities, and conservation efforts to ensure that Istanbul remains resilient in the face of future challenges.

3.3. Meeting Istanbul Water Demands through Inter-basin Water Transfers

It is known that the city of Istanbul has had a water shortage since the Byzantine period and has received immigration since the dusty pages of history (Kentel, 2019). One of the modern solutions offered has been to create the Melen Dam project to address water shortage of Istanbul. Inter-basin

water transfers are made feasible by the existence of short- and long-term concerns by policymakers, such as climate change and population growth, which may affect the supply of water in certain areas and basins (Purvis and Dinar, 2020). Purvis and Dinar (2020) assert that inter-basin water transfers have an impact on the local people, environment, and water-transmitting (transit), water-importing (downstream), and water-exporting (upstream) areas. In 2023, 1,117,064,116 m^3/year water is consumed in Istanbul. The city has a water demand of 3,060,450 m^3/day, and 66% water consumption in European side, 34% in Asian side.

In the 1990s and later, as the city population in Istanbul was nearly 10 million, the increasing water demand began to be met with difficulty (teyit.org, 2020). Therefore, with increasing water cuts, water was transported to the neighborhoods with water tankers. However, due to the İSKİ corruption and the problems caused by the water cuts in 1993 (Yeniçağ Gazetesi, 2023), Recep Tayyip Erdoğan was elected as the Mayor of Istanbul Metropolitan Municipality in the 1994 local elections. Thus, water began to be brought from Istrancalar to provide additional water supply to Istanbul (see Section 3.2. Istanbul's Water Supply Systems).

Table 3.1. Population and Water consumption data for Istanbul (Source: TMMOB Çevre Mühendisleri Odası İstanbul Şubesi, 2020).

Year	Population (person)	Water consumption (m^3/year)	Water consumption (liter/person-day)
1932	713,420	12,900,827	50
1952	1,043,000	44,687,000	117
1972	2,545,000	120,609,000	130
1995	8,200,000	304,353,000	102
1999	10,000,000	339,200,000	93
2010	13,255,685	778,027,000	161
2013	14,160,467	909,454,000	176
2015	14,657,434	965,155,000	180
2016	14,804,116	998,623,000	185
2018	15,067,724	1,040,965,000	189

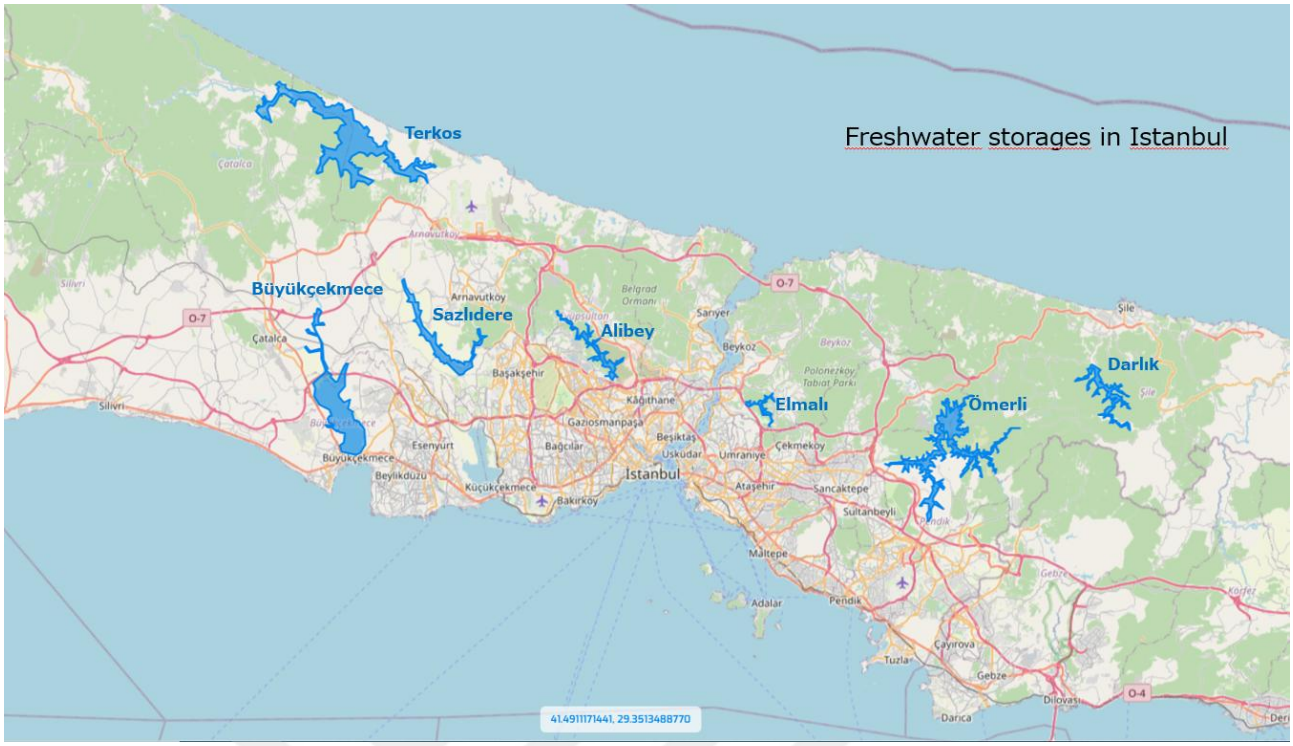

Figure 3.1. Freshwater Storages in Istanbul. (İSKİ; 2024)



Figure 3.2. Water Transfer from Istrancalar (West of Istanbul). (İSKİ, 2024)

3.4. Role of the Great Melen Project in Istanbul

> *«When we undertake a great Project for our country, we have to expropriate it [the land]. It is a very beautiful place, a natural wonder, [and] the soil is very fertile. We have to expropriate these places in order to provide water to Istanbul.»*
>
> Quote 24, Government, 2011

Istanbul is an important symbol of modernization and development in Turkey being most populated city and economic hub. Developmentalism in Turkey is accepted with infrastructure development, which significant investments made by the State such as dams, bridges, power plants and roads – which are named as "mega development projects" (Flyvbjerg, 2014). In Istanbul, this approach has manifested in the construction of new bridges, tunnels, airports and residential developments. These Istanbul-oriented "mega development projects" increased economic growth and transformed Istanbul into a "megacity" in which approximately 20 million people are living, while creating ecological sacrifice zones in, around, and near the city, and destroying water basins in Istanbul.

To meet these increased energy, water and material needs of Istanbul, the city has often turned to its surrounding cities, resulting in significant ecological and social sacrifices. One notable example is the use of cities near Istanbul, such as Zonguldak and Çanakkale, for electricity production from coal, as highlighted by Aydın (2019). The construction of power plants and other energy infrastructure has led air and water pollution, creating severe health problems for local people. These sacrifices have had detrimental effects on the environment and the livelihoods of those living in these areas. The Melen Project provides a similar example. To meet the growing water needs of the city, a dam and regulators have been built on the stream, leading to changes in the stream's flow, habitat and livelihood destruction, and potential negative impacts on biodiversity.

The construction of dams, often presented as symbols of progress and development, has been a contentious issue in many parts of the world. Adaman et. al. (2016) argues that dams are typically portrayed to the public as engineering marvels, job creators, and contributors to overall development. This positive framing helps to obscure the potential negative consequences of such projects, including displacement, environmental damage, and the erosion of cultural heritage. By presenting dams as beneficial to society, the state can create a sense of consensus and legitimize its actions. However,

while the state often justifies its actions by claiming to act in the best interests of the nation, its policies often serve the interests of powerful economic actors.

The Yusufeli Dam project is a prime example of how the state, through its discourse of development, can manipulate public opinion and create consent for such projects, often at the expense of local communities. As Evren (2016) notes, the AKP government's decision to nationalize the project after it had been acquired from private companies was a strategic move aimed at consolidating its power and ensuring that the benefits of the project accrued to its supporters. The expectations of local communities regarding employment and expropriation fees also highlight the power dynamics at play in the Yusufeli Dam project. After the AKP won the election in the district in 2009, villagers were more likely to expect favorable treatment from the state. This expectation was reinforced by the perception that the state was more likely to listen to their concerns than international consortiums. However, the desire for certainty and control also played a role in the villagers' decision to sell their properties. Many were tired of the uncertainty surrounding the project and saw selling their land as a way to secure a more stable future. This willingness to consent to the project is similar to the situation in Ortaköy, where residents were also pressured to sell their properties to make way for development projects.

The expropriation process for the Melen Dam project offered villagers in Ortaköy substantial financial compensation, far exceeding their previous earnings. This perceived windfall, however, fell short of the true value of their land and homes. Despite this discrepancy, the villagers largely agreed to the project, perceiving it as a state-driven development initiative. The belief that "if the state is doing it, they must know something" fostered a sense of cooperation. Over time, however, disillusionment set in as villagers encountered delays in receiving compensation, realized the inadequacy of the funds they received, and struggled to adapt to their new living conditions. Even amid these hardships, the villagers' discourse remained focused on resentment rather than outright rebellion against the state. Their grievances centered on a perceived lack of respect and acknowledgment of their sacrifices, expressed in sentiments such as they should have at least “asked for consent from the villagers"[2].

[2] See Quote 62 by a Local Resident “*…ama bizim de helalliğimiz alınmalıdır.”* (but they should have our consent) and Quote 58 by another Local Resident “*bizim mağduriyetimiz bir nebze evlerimiz olduğu zaman giderilmiş olacak, biz de devlete olan hakkımızı helal etmiş olacağız.”* (Our grievance will be alleviated to some extent when we have homes, and we will forgive our rights to the state).



Figure 3.3. Construction projects in the Sazlıdere Dam basin. (Source: Author)

The Melen Project, which aims to supply water to Istanbul, is viewed as a strategic opportunity to increase the pressure on several water basins in Istanbul, with the Sazlıdere Dam standing out as a prime example of this transformation. Sazlıdere Dam is going to play a crucial role in the Kanal Istanbul Project, where the water sources will be repurposed to support this “mega waterway project” (Daily Sabah, 2021). The Kanal, which is going to be an alternative for Bosphorus, will also serve as the foundation for the development of an urban area, which is called as “Yenişehir”. With this ambitious plan, a new city around the Kanal Istanbul is to be created, with accommodations for a “qualified population” which is a term frequently mentioned about the social and economic profile for the future residents. Kanal Istanbul represents a barrier between the old city and this new, modernized settlement, suggesting a planned transformation of demographic and economic landscape of Istanbul. The potential impact of the project on the environment, water resources and local residents in the area remains as a question of debate as they measure the potential benefits of so-called economic development against the risks of environmental degradation and resettlement of the residents. The own water sources of Istanbul, is being sacrificed for the Kanal Istanbul project, even though significant resources are being put in the Melen Project to supply water to Istanbul. The trade-off associated with urban expansion are highlighted by this preference for economic growth and new urban development prospects over environmental and ecological conservation.

4. METHODOLOGY AND ORTAKÖY VILLAGE AS CASE STUDY

Ortaköy (Lahna) is a town (belde) which is 86 km away from Sakarya city center and 15 km away from Kocaali district in Sakarya. Before the expropriation the town was governed by AKP mayor Cemal Angın, who was elected with 558 votes (%62.6 of total votes) in 2009 Local Elections. Gümüşoluk and Çobansayvant villages were entered under Ortaköy town with the name of Ortaköy Neighborhood in 2011 and entered under Kocaali district in Sakarya.

In accordance with the temporary article 1 of the Law No. 6360 on the Establishment of Metropolitan Municipalities in Thirteen Provinces and Twenty-Six Districts and Amendments to Certain Laws and Legislative Decrees, which was published on December 6, 2012, the legal personality of Ortaköy Municipality ended as of the March 30, 2014, Local Elections (Resmi Gazete, 2012). In 2014, the residents of Ortaköy evacuated their homes in 2014, along with the Karalar, Köyyeri and Beyler villages, Cuma neighborhood, due to the construction of the Melen Dam (Milliyet, 2014).



(a) (b)

Figure 4.1. Ortaköy before (a) in 2011 and after the expropriation in 2024 (b)

Residents in Ortaköy had based their livelihood on hazelnuts. The center of Sakarya hazelnut is Ortaköy and its surroundings. Except for hazelnut, different kinds of apples and pears, dates, plums, strawberries, cherries, chestnuts, linden, watermelon, beans, corn, etc. were grown for villager's own needs and for hobbies (Ortaköy Tarihçesi, n.d.).

This study aims to examine the attitudes of various stakeholders impacted and affected by the Great Melen Project through the lens of environmental justice. Total of 70 quotations were gathered from five stakeholder groups and categorized based on environmental justice dimensions (Douguet et. al., 2016; Schlosberg, 2007). In order to achieve this aim, a preliminary desktop research was conducted to establish the study's structure and form an opinion about the stakeholders. After the desktop research, both online and on-site interviews were conducted with selected stakeholders and experts, including in-depth interviews lasting approximately one hour each. Open-source archives, including local newspapers and video news, were examined in order to understand stakeholder perspectives. Additionally, in June 2024, a field visit was conducted in the Melen region, including trips to Ortaköy, the Melen Dam, and the İSKİ regulator sites.

As a starting point for the case of Ortaköy, I used Facebook to understand who the residents were and connect with them. I searched Facebook groups with keywords such as "Melen", "Melen Stream", "Melen Protection", "Düzce Melen" to understand potential local stakeholders. I explored the perspectives of local groups and organizations in Düzce and Sakarya towards the Melen Project and the Melen Dam construction. In the preliminary study, the following three Facebook groups were found and examined: (i) "Ortaköy 'Lahna' Town Archive", (ii) "Big Melen Basin Protection and Sustenance Association", and (iii) "Güzelköy (Melen) Solidarity and Assistance Group".

For the field study, I joined the Ortaköy 'Lahna' Town Archive Facebook Group through my personal Facebook account. The Melen Dam project is considered a Mega Water Transfer Project affecting many villages (Islar and Boda, 2014) in the region, however. I was only able to contact an active Facebook group of displaced people in Ortaköy village. In this group, villagers were still in solidarity among themselves. Information about the villagers and old neighbors is shared and announcements about weddings and funerals are given. Old photos of the village are included in the group and there is also a blog page (https://ortakoy54.blogspot.com/) detailing the village's history and photo albums. I spoke with the administrator and several members of the Association for the Protection and Sustenance of the Great Melen Basin to get more information about the circumstances facing the residents of Sakarya.

Afterward, using local news articles, press releases, video news, NGO reports, and institutional reports, I collected quotations and grouped them among 5 different stakeholder groups as ahown in Table 4.1.

Table 4.1. Stakeholder groups.

Stakeholder Groups	**Details**
Government	DSI (State Hydraulic Works)
Experts	Chamber of Environmental Engineering
Local Residents	Residents of Ortaköy village.
Media Representatives	Journalists in local newspapers.
Local Government of Istanbul	ISKI (Istanbul Water and Sewage Administration)

In the Government stakeholder group, the DSI (State Hydraulic Works) representatives are considered as the focal point which are responsible for the planning, management, development, and operation of water resources, including dams and water transfer projects. DSI 14th Regional Directorate is responsible for the Melen basin and has been considered as the main contact. However, since the DSI did not find it appropriate to share data on ongoing projects within the institution, the statements of the 14th Regional Director of the project period, which can be found in open sources, were added to the Quotations table, presented in Appendix A.

For the Experts, Chamber of Environmental Engineering representatives and the previous Istanbul branch manager are contacted as a key contact. Ortaköy Residents are found from the Ortaköy 'Lahna' Town Archive Facebook Group and video news archives as 17 different residents. Media Representatives include local and national newspapers and articles, and an in-depth with a local journalist who still lives nearby Ortaköy. Local Government of Istanbul is separated from the Government stakeholder group because of the different perspectives and different actors. For the Local Government of Istanbul, ISKI (Istanbul Water and Sewage Administration) representatives were contacted as the planners and operators of Istanbul's water supply system.

The arguments are categorized as quotations and arranged by Schlosberg (2007)'s concept of the Environmental Justice dimensions which are classified as ecological distribution, economic distribution, recognition, participation, creation, and subsistence. Three observable environmental justice dimensions are selected in the scope of the thesis.

- *Distribution:*
    - *Ecological distribution:* the distribution of hazards or pollution due to increased social metabolism (Martinez-Alier, 2009).
    - *Economic distribution:* The distribution of economic benefits, opportunities, risks and costs across individuals or communities in a society affected, or across generations over time (O'Connor, 2002).
- *Procedural justice:*
    - *Recognition:* the ability to consider and recognize the rights of other human beings and non-human beings (Honneth, 2001)
    - *Participation:* decision making process through which environmental demands can be met through long-term interaction with communities (Kato-Huerta & Geneletti, 2022)

Themes and statements frequently raised by stakeholders are grouped under each Environmental Justice dimension in the form of quotes.

5. ENVIRONMENTAL JUSTICE AND THE GREAT MELEN PROJECT

Environmental justice is the involvement of the communities, regardless of race, ethnicity, income, or gender, in environmental policymaking and enforcement. It seeks to address the disproportionate environmental burdens marginalized communities face, particularly concerning pollution, hazardous waste, and resource depletion. The concept emerged from grassroots movements in the United States during the 1980s but has since expanded into a global framework for understanding the intersection of environmental harm and social inequality (Agyeman et. al., 2016).

A central tenet of environmental justice is that low-income and minority communities often bear the brunt of environmental degradation. For example, industrial facilities, waste dumps, and polluting factories are frequently located in or near neighborhoods with lower socioeconomic status, exposing residents to higher levels of air and water pollution, toxic chemicals, and other environmental hazards. These communities tend to have limited political power and are often excluded from decision-making processes that affect their environment. Environmental justice advocates argue that this is a form of systemic inequality, linking environmental harm with broader social, racial, and economic injustices.

The quotes were collected from five stakeholder groups as Government, Experts, Local Residents, Media Representatives, and Local Government of Istanbul. According to the quotes that are collected, no protest has happened during the expropriation. There are problems related to the governance and project management, which in turn led to a lack of communication and information sharing between the villagers and governmental bodies. Due to this lack of communication, many of the displaced villagers could only receive compensation for their losses in the short term, mostly ignoring the long-term effects of migration from the village where they had lived for centuries. Most of the quotes collected from the villagers indicate that the project had negative environmental and socio-economic effects (mostly related to the displacement), pointing mostly the distributional and procedural dimensions of environmental justice. Against this, the discourse by the governmental institutions was that such development projects could cause displacement, but these projects are necessary and must be built– referring to the fact that Istanbul's water resources are completely dependent on Melen. Governmental officials also state that all the actions mentioned in the related legislations were considered, eventually reducing the justice and compensation to a legal procedure.

In this section, quotes were evaluated and the most relevant ones were highlighted under each environmental justice dimension.

5.1. Procedural Justice

5.1.1. Recognition

The most common dimension encountered among the quotes by the stakeholders is recognition justice. A total of 26 quotes are gathered from Residents, Experts, and Media Representatives. Many of these quotes show that how the history, culture and overall rights to information and decision making of the residents were ignored during the project timeline, as seen in Quote 18, below.

> *"This project means erasing our history. My life will be sold here. We will suffer great stress after leaving here."*[3]
>
> *Quote 18, Resident, 2011*

The project does not consider the significance of recognizing, valuing, and incorporating the residents as well as the history of the village. Relationships between relatives, and neighbors that have been nurtured over decades have now been severed (Quote 12 in Appendix A), with the residents expressing the sense of loss and disorientation. Because of the expropriation, the residents - – families of some of whom lived in the region for centuries – face the loss of their social bonds, cultural heritage, and their history (Quote 64 in Appendix A).

The residents have complained about the lack of information and communication from the authorities regarding the project's status and that their full consent was not taken openly (see Quote 62, below. Residents received short notices of upcoming evacuations with limited time for preparation caused by the poor management of the expropriation procedure (Quote 60 in Appendix A), indicating that top-down governance is implemented in the case and "human-centered, long-term guidance is not given" to the residents (Quote 32 in Appendix A).

[3] Quote 18 – Resident, 2011: "*Bu proje bizim özgeçmişimizi silmek demektir. Benim hayatım satın alınmış olacak burada. Büyük stres çekeceğiz buradan gittikten sonra*."

> *"The government may victimize us through the resettlement and provide Istanbul drinking water, not only until 2041 or 2071, but until apocalypse – as long as Istanbul stands and* [Melen] *river flows. However,* [for this to happen] *our consent must also be taken."*[4]
>
> Quote 62, Resident, 2014

Although residents complained, there were no demonstrations or public movements concerning the expropriation. The "lack of awareness" (Quote 34 in Appendix A) among the villagers of the long-term effects of the expropriation is due to a significant breakdown in the information given by the government. The lack of awareness and neglecting the long-term effects led to the residents "prioritize what they would receive first" (Quote 36 in Appendix A). This was caused by the approach of the government as they said "Didn't they take their money?" (Quote 43 in Appendix A), reducing the rights of the local residents to only that of the monetary compensation (fairness of which is also debatable, as discussed in section 6.1.2 above).

The Quotes gathered from the local residents highlight how they became aware of the negative impacts only after the project started to materialize, showing that had they known the impacts before, they would have acted differently (See Quotes 10 and 11, below). Journalist also mention the severe and continuing effect of the displacement on the villagers, especially the elderly, who have not been able to adjust to the city after the expropriation. This situation highlights the need for increased awareness and guidance in the resettlement procedures, highlighting the significance of paying attention to the cultural and mental health of the residents impacted in addition to the expropriation.

> *"Now it's very difficult for people. If all the villages had united against it back then, maybe it wouldn't have happened. Could they build a dam in Rize? The whole village united and resisted, but back then, everyone was only interested in money; our villages didn't matter to them."*[5]
>
> *Quote 10, Resident, 2023*

[4] Quote 62 – Resident, 2014: *"Yerleşim konusunda devletimiz tarafından mağdur edilirsek, İstanbul'un içme suyunu değil 2041, 2071, kıyamete kadar İstanbul durduğu ve Melen aktığı sürece sağlayabilirsiniz. Ama bizim de helalliğimiz alınmalıdır."*

[5] Quote 10 – Resident, 2023: *"Şimdi çok zor geliyor millete. Zamanında bütün köyler bir olup da karşı çıkılsaydı belki olmazdı. Barajı Rize'de yapabiliyorlar mı sanki? Bütün köyler bir oluyorlar, karşı çıkıyorlar. Herkes paraya tamah oldu o zamanlar köyler umurlarında değildi."*

"[…] The villages are gone, the people scattered, the roads are in ruins, and now, even if it's talked about, it doesn't matter anymore."[6]

Quote 11, Resident, 2023

"The elderly people of Ortaköy now live in different districts. When we talk to them, we notice a significant difference between their current mindset and the one they had while living in Ortaköy. We are also aware of those who have started using antidepressants."[7]

Quote 35, Journalist, 2024

5.1.2. Participation

Stakeholders also frequently quoted issues about the problems regarding participation and Residents, Media Representatives, Experts, and Local Government of Istanbul stakeholder groups had a total of 9 quotes.

Most of the Quotes gathered from the stakeholder groups show that a lack of information is present in the case, which states a clear injustice regarding participation. The Residents were informed about the Dam and Environmental Impact Assessment Report presentation (Quote 41 in Appendix A), although necessary information was not conveyed to an understandable level to the Residents. This created a knowledge gap and a lack of preparation and participation for the villagers. Additionally, the residents were not even given the opportunity to properly handle their cultural assets, such as moving their graves in the given time with eviction letters. The residents were excluded from the process of the project due to a lack of communication over the completion date of the dam – which still uncertain (See Quote 23, below).

[6] Quote 11 – Resident, 2023: *"Tabii ki yaşlılara gerçekten zor gelmiştir, çoğu kişi de rahmetli oldu. Benim küçüklüğümden beri çalışma yapılıyordu. Köyler gitti, insanlar dağıldı, köylerin, yolların perişan olduğu doğru. Ama artık konuşulsa da bir şey fark etmiyor."*

[7] Quote 35 – Journalist, 2024: *"Yaş almış Ortaköy beldeli insanlar farklı ilçelerde yaşıyorlar artık. Bunlarla görüştüğümüz zaman Ortaköy'deki dünyaya bakış ve ruh halleri ile şimdiki ruh halleri arasında çok büyük farklar var. Antidepresan kullanan kişilerin varlığından da haberdarız."*

"We are worried as citizens. We want the officials interested in the Project, the Minister of Environment, to come and gather our people and at least inform them about the stage of the Project, where and how the public will be directed."[8]

Quote 23, Resident, 2011

The villagers were not united when the dam project was proposed. The explanation for the project moved forward without significant resistance is the lack of collective action. However, after the expropriation, awareness among the residents increased when the correct and understandable level of information was shared for another project in the basin. This implies that the community might have been able to participate more successfully if they had been adequately informed from the beginning. A journalist exemplifies another project (an organized industrial zone specialized in chemical industry) against which residents successfully opposed to, since they had enough information about the project and potential impacts of it (See Quote 46, below). The lack of communication is even recognized by the Local Government of Istanbul (as seen in Quote 50, below), who also stated that they have done everything in line with the current legislation.

"The district residents became more aware after the process; after correct information was conveyed to the public through correct methods, they opposed the chemical organized industrial zone (OSB)." [9]

Quote 46, Journalist, 2024

"We have no communication with the public about when the dam will be completed. We implement everything according to the special obligations prepared by TÜBİTAK"[10]

Quote 50, Local Government of Istanbul, 2024

To conclude, the analysis reveals significant failures in participation justice within the environmental justice framework. The residents were not given enough information and involved

[8] Quote 23 – Resident, 2011: *"Vatandaş olarak tedirginiz. Projeyle ilgilenen yetkililerden, Çevre Bakanı'ndan gelip halkımızı toplayıp, en azından bilgilendirme amaçlı projenin ne aşamada olacağının, halkın nerelere ne şekilde yönlendirileceğinin anlatılmasını istiyoruz."*

[9] Quote 46 – Journalist, 2024: *"İlçe halkı süreçten sonra bilinçlendi, doğru yöntemlerle halka doğru bilgiler aktarıldıktan sonra Kimyasal OSB'ye karşı çıktılar."*

[10] Quote 50 – Local Government of Istanbul, 2024: *"Güncelde barajın ne zaman biteceği ile ilgili halk iletişimimiz bulunmuyor. Her şeyi TÜBİTAK tarafından hazırlanan özel yükümlülüklere göre uyguluyoruz."*

enough in the decision-making process. As a result, the public voices went unheard, the questions went unanswered and the ability to participate in a meaningful way was severely limited. the residents were left out of decisions that had a major impact on their environment and change on their lives due to a lack of unity, poor communication and ethical oversights.

5.2. Distributional Justice

5.2.1. Ecological Distribution

Ecological distribution is one of the dimensions mentioned most by the stakeholders – 17 quotes were collected. Local Residents, Government, Media Representatives, and Experts stakeholder groups made statements in the ecological distribution dimension.

Residents frequently quote about their villages and their environmentally living conditions in Ortaköy before the displacement. The poor environmental conditions caused by the construction of the dam and roads (which are still under construction for almost 10 years) have left the residents in a feeling of neglect. However, even though the residents see this case as an "environmental disaster", there is no vocal protest against it. According to most of the residents, the expropriation that happened in 2014, forcing the residents to leave, demolishing their houses and disrupting the land around them was apparently for a wasteful project that has not even materialized – so they feel like they have left their homes for nothing. According to a resident [See Quote 26 below], if the dam was built, she would able to go on trips with her children. This is actually one of the quotes indicating that, from the local residents' perspectives, one of the real problems is that the dam was not built.

> *"If the dam was built, we would probably go on a trip with our children, but since it was not built, we are victimized* [even more]*"*[11]
>
> Quote 26, Local Resident, 2023.

Government officials' stance against the project is a rather complex one. One statement [Quote 25] quotes the Melen River as a more "suitable point" for the water source for Istanbul than Sakarya River Basin, and hence, they need to sacrifice the area to meet Istanbul's water needs. Government

[11] Quote 26 – Local Resident, 2023: *"Baraj yapılsaydı çocuklarımızla gezmeye giderdik belki, ama yapılmadığı için mağduruz"*

sees the project as a necessity for having a backup water source for Istanbul despite the ecological impacts – providing a perfect example for the development vs. nature dichotomy and how the government choose development over ecological well-being.

> *"It's a very beautiful natural wonder, the soil is very fertile.* [But] *It must be expropriated to supply water to Istanbul."*[12]
>
> Quote 25, Government, 2011.

The Melen River flows into the Black Sea, and in its delta hazelnut and corn are grown. In Quote 40, a critical environmental risk is mentioned by a journalist as the increased potential for wind to push salty water inland since there is now decreased flow of freshwater into the delta. This will potentially harm hazelnut and corn production and without precautions, the land in the basin will not be suitable for agriculture. This suggests an additional ecological distribution issue in the long term: the ecological repercussions of the Great Melen Project could lead to the loss of valuable agricultural land, which would have a direct influence on the other settlements in the basin.

The ecological issues relevant to both Istanbul and Ortaköy were also the subject of the in-depth interview with the Chamber of Environmental Engineering Istanbul Branch. The Experts state that, without a dam, the energy needed to transfer water with only currently existing regulators is very high, and hence it not economically and ecologically sustainable [See Quote 49, in Appendix A). However, they also quote that "The entire water system of Istanbul depends on Melen" (Quote 48 in Appendix A), hence the dam needs to be built, causing several ecological (and social) problems. Furthermore, relying this heavily to only Melen basin may cause several problems for Istanbulites in terms of water security. Assessing all these different issues, the interviewed expert opposes the Melen project, arguing that "The correct solution is to protect Istanbul's water basins; building a dam is not the [correct] solution" (Quote 53 in Appendix A). Yet currently, the water basins in İstanbul are being open to urban development instead of being protected. As stated in Quote 67, the approach taken by the growth-oriented policy makers for Istanbul is "Since water is available [now, coming from Melen, anyway], the basins [in Istanbul] should be given up for development". While Istanbulites seem to benefit from a water source far away, they are also affected by the loss of natural areas in their own city.

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[12] Quote 25 – Government, 2011: *"Çok güzel tabiat harikası bir yer, toprağı çok verimli. İstanbul'a su verebilmek için buraları kamulaştırmak durumundayız."*

The ecological distribution problem is closely related to the economic distribution, as exemplified by the destruction of hazelnut orchards, cutting the community off their primary means of livelihood [See Quote 4, below]. Two different expropriation schemes affected the hazelnut orchard owners. First, those in the areas that would be flooded were expropriated, houses in the area were destroyed, and people were displaced. Second, the areas that fall into the 300 m protection band (called strict protection zone) were expropriated, as well, and houses were also destroyed. With the current stalling of the construction of the project, people in those areas started returning to their orchards and some even rebuilt their homes, albeit illegally. However, according to a journalist (see Quote 37, in Appendix A), government and State Hydraulic Works officials currently seem to shut their eyes to these new developments.

> *"They expropriated thousands of acres of hazelnut orchards, demolished hundreds of houses, barns, and haylofts, and they no longer exist".*[13]
>
> Quote 4, Local Resident, 2023

The quotes demonstrate how the Great Melen project and Istanbul's water system management present an ecological distribution problem, putting a rural community at risk of ecological and social harm as a result of incomplete infrastructure of the dam and land expropriation. The reliance on a single water source, the environmental degradation of the Melen River and the inequality in the distribution of water resources between Istanbul and the Melen basin shows that benefits are taken by Istanbul but the costs remain local.

5.2.2. Economic Distribution

14 quotes were collected under economic distribution dimension. Local Residents, Government, Media Representatives, and Experts stakeholder groups made quotes in the economic distribution dimension. Many of these quotes are about how people were not compensated enough by the expropriation scheme and how they were cut-off from their livelihoods, mainly the agricultural lands they owned

[13] Quote 4 – Local Resident, 2023: *"Binlerce dönüm fındık bahçesini istimlak ettiler, yüzlerce ev, ahır, samanlık, yıkılıp yok oldu"*

The expropriation of Ortaköy and nearby villages was made in 2014. Residents received their expropriation fees according to their lands, but the issue of fair compensation is controversial among Residents. The villagers were economically disempowered by the expropriation and the loss of their primary assets—hazelnut orchards and land used for livestock farming— (See Quote 4, above). According to the residents, the expropriation fee provided is inadequate compared to the economic value of their land and properties. As seen in Quote 20 below, the fee offered for 3 acres of land was barely enough to cover living expenses and the villagers could not afford to buy new properties, hence villagers were left with limited access to economic opportunities (see Quote 28, below). Relocating to an urban area does not ensure employment, and if one does find a job, it is likely to be a low-wage job that do not offer the same level of financial security as their prior living conditions. This lack of economic opportunity weakens the residents' ability to improve their economic situation.

> *"[…] The money for 3 acres is barely enough for tea expenses, I can't buy anything. If they give me the rest of the money, then let them come and build the dam here."*[14]
>
> Quote 20, Local Resident, 2011

> *"Due to the destruction of the village in 2014, some received a compensation payment of 110,000 TL. Before they could collect the expropriation money, the villagers were forcibly evicted from their homes, and electricity and water were cut off. […]The houses of those whose homes were demolished were built by the Housing Development Administration (TOKİ), but the houses were offered for sale at 50,000 TL. Villagers with hazelnut orchards and two-story houses were forced to live in the city on a minimum wage."*[15]
>
> Quote 28, Local Resident, 2023

The poor management of the expropriation led to economic instability among the residents. While they received compensation, it was often insufficient for resettlement in the same area, forcing them to move to other areas, such as Düzce, Akçakoca, İstanbul, İzmit (See Quote 29 below). The

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[14] Quote 20 – Local resident, 2011: "*3 dönüm yerimizi aldınız,12 dönüm yerim dışarda kaldı. 3 dönüm yerin parasını çay parası yapar harcarım, bir şey alamam. Diğer parayı da verirlerse o zaman buraya baraj yapmaya gelsinler."*

[15] Quote 28 – Local resident, 2023: *"2014 yılında meydana gelen köy yıkımı sonucunda dönem bedeliyle 110 bin TL kamulaştırma bedeli aldı bazı kişiler. Kamulaştırma bedeli tahsil edilemeden köylüler zorla evlerinden tahliye edildi, elektrik ve su kesintileri yaşandı. Ev bulamayanlar ve mağdurlar bölgede kaldı. Evleri yıkılan köylülere Toplu Konut İdaresi Başkanlığı (TOKİ) tarafından evler yaptırıldı ancak evler 50 bin TL'ye satılmaya çalışıldı. Fındık bahçeleri ve iki katlı evleri olan köylüler, şehir hayatında ve asgari ücretle yaşamak zorunda kaldı."*

residents faced "economic turmoil" after receiving the expropriation fee, some of them sold their lands for lower prices (Quote 28, above), some of them faces difficulties in managing money as they encounter money "they would never see in their lifetime" (Quote 31, in Appendix A). They even try to sell their lands outside the protection zone and see expropriation as an economic opportunity (Quote 45 in Appendix A).

> *"Since the process was managed late, very few the residents settled in the district* [of Kocaali] *and others bought houses and orchards in Karasu, Düzce, Hendek, Adapazarı, İzmit, Akçakoca."*[16]
>
> Quote 29, Journalist, 2024

The Quote 24 from the Government explains the opinion about expropriation and highlights an issue where the economic burden of development projects is placed on local communities through the loss of land and livelihoods. This method essentially puts large-scale investments ahead of the welfare of the communities and those who would be directly affected by the displacement and institutionalizes the displacement of communities. This further illustrates an economic structure that prioritizes infrastructure development over social and environmental justice.

> *"When a project is undertaken in our country (highway, high-speed train, dam), if we're making a large investment, we must carry out expropriation."*[17]
>
> Quote 24, Government, 2011

One of the important quotes about the economic nature of the Melen project captures well how capital has taken control of Istanbul's water basins in order to make profits, emphasizing the commoditization of natural resources. The situation is a reflection of a larger economic distribution justice in which capital interests control natural resources that ought to be managed for the benefit of the public (See Quote 70, below). The villagers who lost their land were not equally compensated

[16] Quote 29 – Journalist, 2024: *"Süreç geç yönetildiği için bu insanlar kamulaştırma bedellerini aldıkları zaman ilçeye çok az yerleştiler. Karasu, Düzce, hendek, Adapazarı, izmit, Akçakoca civarlarında yer ev ve konut aldılar, fındıklık aldılar."*

[17] Quote 24 – Government, 2011: *"Ülkemizde bir proje yapıldığı zaman (otoyol, hızlı tren, baraj) eğer büyük bir yatırım yapıyorsak kamulaştırma yapmak zorundayız."*

and were forced into economic situations that are worse than their previous conditions, and the economic burdens were disproportionately placed on the vulnerable communities.

> *"Istanbul has been rendered helpless, and the only reason for this is that all of Istanbul's water basins have been surrendered to capital for profit."*[18]
>
> Quote 70, Expert, 2024

The economic and ecological distribution injustices in the case highlight significant inequalities caused by the development projects. The lack of fair compensation for the residents' land and poor management of their resettlement caused them to be displaced, which led to long-term economic challenges and decreased their ability to survive. Vulnerable groups were disproportionately affected by the environmental effects, which included reduced agricultural productivity and mismanagement of water basins for profit. Eventually, both economic and ecological burdens were placed on those least available to handle them, highlighting a clear case of environmental justice.

[18] Quote 70 – Expert, 2024: *"İstanbul çaresiz hale getirildi, bunun da tek nedeni İstanbul'un tüm havzalarının sermayenin rantına teslim edilmesidir."*

6. DISCUSSION AND CONCLUSION

> *«The prescription is as unimaginative as it is expensive: "Pump fresh, large quantities of water wherever you can find it." "To Megapolis"... "Megadistance" in between.»*
>
> *Robert, 2003, p. 54*

The conflict surrounding the Melen Stream, as examined in this study, serves as a microcosm of the larger environmental struggles taking place globally. The overt clashes between environmental activists and governmental agencies are often documented in other better-known cases. However, the more subtle and often silent conflicts, characterized by more complex power dynamics and resulting in environmental degradation and social injustice, such as the one involving the Melen Stream, remain largely understudied. This thesis aimed at understanding these injustices, and how they are legitimized, through a discourse analysis of the statements collected from different stakeholder groups.

One of the main findings of this study is that there are significant environmental injustices occurred as a result of the Great Melen Project, both from distributional and procedural justice perspectives. The project, especially due to the processes related to the construction of the dam, caused several ecological distribution problems, mostly exemplified as the destruction of natural and agricultural areas. Economic distribution problems largely occurred due to the displacement of villagers and expropriation of their agricultural land, mostly hazelnut orchards. On top of these, the mal-recognition of the rights of the residents seems to be one of the main underlying factors, immediately relating to the under-representation and mal-participation of the residents in the decision-making processes.

The political decisions behind many large infrastructure projects often prioritize the interests of specific groups, reinforcing power dynamics and restricting access to a vital resource. This can lead to conflict, as those displaced or excluded by such projects frequently resist. These conflicts expose divergent perspectives on resource use, governance, and justice, highlighting the political nature of infrastructures. As it is also the case for the Great Melen Project, such large infrastructure projects, are often portrayed as symbols of progress and development, showcasing the power and might of the state, while obscuring potential negative consequences such as displacement and environmental

damage. By framing these projects as beneficial to society, states can legitimize their actions and create consent in local people. However, the reality for those affected can be quite different. In the case of the Melen Dam project, villagers may have received substantial financial compensation at the beginning, but then faced significant challenges in adapting to their new circumstances. While they did not openly rebel, their grievances centered on a perceived lack of respect and acknowledgment of their sacrifices.

The state's employment of developmentalist arguments to justify the construction of the Melen Dam highlights a common tactic used in such projects. By framing development as a necessary step towards progress and prosperity, the state seeks to create a sense of consent among local communities. While this strategy may be effective in materialising the projects, it often overlooks the long-term environmental and social costs associated with such projects. In the case of the Melen Stream, the construction of the dam has led to significant ecological damage, displacement of local communities, and erosion of cultural heritage, which were all justified because Istanbul, the locomotive of growth of the country, needed water, and this was above all other priorities.

While this analysis has focused on the roles of the state and local communities in the Melen Stream conflict, a more comprehensive understanding requires further exploration of other key stakeholders. Corporations, international financial institutions, and other actors often play significant roles in shaping the outcomes of environmental conflicts. For example, corporations may have vested interests in the development of such infrastructure projects (for instance, opening up the land around the water reservoirs in İstanbul, now that there is another reliable water source), while international financial institutions may provide funding for such projects. By examining the interconnectedness of these stakeholders, it is possible to gain a deeper appreciation of the complex dynamics at play in environmental conflicts.

In conclusion, the case of the Great Melen Project and what happened in Ortaköy village offer valuable insights into the often-silent nature of environmental struggles and into the strategies employed by states to justify development projects. By understanding the underlying power dynamics and the roles of various stakeholders, it is possible to develop more effective strategies for addressing environmental challenges and promoting sustainable development. Future research should seek to explore the broader implications of the Melen Stream conflict and to identify lessons that can be applied to other environmental conflicts around the world.

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APPENDIX A: QUOTES COLLECTED FROM STAKEHOLDERS

Quote ID	Quote	Quote	EJ Dimension	When	Stakeholder Group	Resource
1	Geçmişimizi bitirdiler.	They destroyed our past.	Recognition	2023	Resident	In-depth interview
2	Baraj gövdesi çatladı, su tutmaya cesaret edemediler. Şu anda bu barajın yıkılıp yeniden yapılması gerekiyor, çevre yollar batakhaneye döndü.	The dam body cracked, and they didn't dare to hold the water; now this dam needs to be demolished and rebuilt. The surrounding roads have turned into a swamp.	Ecological Distribution	2023	Resident	Facebook group comment
3	Araçla zorla köylerimize gidiyoruz, toz toprak çok kötü bir durum var. "Bu bozuk yola beton dökün tozdan kurtulalım" diyoruz fakat ilgilenen yok; terk edilmiş bir inşaat alanı oldu.	We barely reach our villages by car; the dust and dirt are in terrible condition. We say, "Pour concrete on this broken road so we can be free from the dust," but no one cares; it has become an abandoned construction site.	Ecological Distribution	2023	Resident	Facebook group comment
4	Binlerce dönüm fındık bahçesini istimlak ettiler, yüzlerce ev, ahır, samanlık, yıkılıp yok oldu.	They expropriated thousands of acres of hazelnut orchards, demolished hundreds of houses, barns, and haylofts, and they no longer exist.	Economic Distribution	2023	Resident	Facebook group comment
5	Köylerimize baraj içinden zorla geçiyoruz. Baraj içindeki tozlu, yapraklı taşlı yolu kullanıyoruz, araçlarımız perişan oluyor fakat ilgilenen yok. On köyün yolu bu baraj içinden geçiyor, perişan haldeyiz tam bir çevre katliamı yapıldı burada.	We pass through the dam, but there is no proper access road around it; we use the dusty, leaf-strewn, rocky road inside the dam, and our vehicles are in terrible condition, but no one cares. Ten villages use this road through the dam, and we are in a miserable state; a complete environmental disaster occurred here.	Ecological Distribution	2023	Resident	Facebook group comment
6	Baraj projesi oldu, herkes dağıldı. Kimse kimseden haberdar değil. Bazı köylülerimiz aynı bölgede ikamet ediyor, bazıları il değiştirdi, cenazeden veya düğünden haberleri olmuyor, biz de katılamıyoruz. Hastası olana sayılı kişiler destek veriyor, bazıları selamını "Belki para ister" diye düşünerek kesiyor. Bazıları düğün yapıyor zenginleri çağırıyor, fakirler cenazeye davet ediliyor. Bazıları hastane önünde karşılaşıyor fakat yüz çeviriyor. Bize ne oldu? Elli yıllık hukukumuz geldi geçti.	The dam was built, and everyone dispersed. Nobody knows anyone anymore. Some of our villagers live in the same area, some moved to another province, but they have no idea about each other's funerals or weddings; we can't attend either. Few people offer support to the poor; some have cut off greetings because they think they might ask for money. Some invite the wealthy to their weddings, while the poor are only invited to funerals. Some meet outside hospitals but turn their faces away. What happened to us? Fifty years of our relationships are gone.	Recognition	2023	Resident	Facebook group comment
7	Millet bitti, Ortaköy kalmadı. Köyü bedavaya kapattıla,r ne ölü kaldı ne diri; birileri bu işten rant sağladı, yani köyümüz bir hiç uğruna kayboldu.	The people have perished; Ortaköy no longer exists. They took it away for free, and neither the dead nor the living remained; some people profited, and our village disappeared for nothing.	Economic Distribution	2023	Resident	Facebook group comment
8	Baraj havzasında hayatı araştırılacak kim kaldı ki halkın %80 dertten keder üzüntüden öldü.	Research who's left alive in the dam basin—80% of the population died from grief and sorrow.	Recognition	2023	Resident	Facebook group comment
10	Şimdi çok zor geliyor millete. Zamanında bütün köyler bir olup da karşı çıkılsaydı belki olmazdı. Barajı Rize'de yapabiliyorlar mı sanki? Bütün köyler bir oluyorlar, karşı çıkıyorlar. Herkes paraya tamah oldu o zamanlar köyler umurlarında değildi.	Now it's very difficult for people. If all the villages had united against it back then, maybe it wouldn't have happened. Could they build a dam in Rize? The whole village united and resisted, but back then, everyone was only interested in money; our villages didn't matter to them.	Participation	2023	Resident	Facebook group comment

11	Tabii ki yaşlılara gerçekten zor gelmiştir, çoğu kişi de rahmetli oldu. Benim küçüklüğümden beri çalışma yapılıyordu. Köyler gitti, insanlar dağıldı, köylerin, yolların perişan olduğu doğru. Ama artık konuşulsa da bir şey fark etmiyor.	Of course, it was really hard on the elderly. Most of them have passed away since my childhood when the surveying began. The villages are gone, the people scattered, the roads are in ruins, and now, even if it's talked about, it doesn't matter anymore.	Recognition	2023	Resident	Facebook group comment
12	Ortaköy beldesinin bir bireyi olarak her geçişimde ağlıyorum. Zira, tahmini olarak 10 veya 15 köy, Ortaköy'ün bir parçası olma, güzelliğinin ve harika insanlarının tadını çıkarma şansına erişmişti ve şimdi 70 yaşıma kadar birlikte yaşadığım insanları artık göremediğimin hüznünü yaşıyorum. Onları Ortaköy'de bulamamak, görüşememek gerçekten çok zor ve bu beni duygusal olarak yıprattı.	As a resident of Ortaköy, I cry every time I pass by. Because, in my estimation, about 10 or 15 villages were blessed to be part of Ortaköy and enjoy its beauty and wonderful people, and now I am filled with sadness because I can no longer see the people I lived with until I was 70 years old. It's really hard not to find them in Ortaköy, not being able to meet, and it has worn me down emotionally.	Recognition	2023	Resident	Facebook group comment
13	Baraj bölgesi tamamen terk edilmiş bir durumda, bilhassa gece geçerken insanı korkularla başbaşa bırakıyor.	The dam area is completely abandoned, especially at night; it's terrifying.		2023	Resident	Facebook group comment
14	2006-2007 yıllarında büyük kuraklık yaşandı, İstanbul büyük kuraklık tehdidi altındaydı. Veysel Eroğlu'nu "şafak harekatı" ile birlikte 20 ekim 2007'de 20.59'da suyu basmayı başardık.	In 2006-2007, there was a severe drought, and Istanbul was under the threat of a great drought. Together with Veysel Eroğlu's "Dawn Operation," we managed to pump water on October 20, 2007, at 20:59.		2011	Government	Video news
15	2007'de %7'lere düşmüş baraj doluluk oranları vardı. Suyu İstanbul'a vermeseydik Nisan 2008'de istanbul susuz kalacaktı.	In 2007, dam water levels had dropped to 7%. If we hadn't supplied water, Istanbul would have been without water by April 2008.		2011	Government	Video news
16	Sakarya Nehri'nin havzası itibariyle su almaya uygun bir noktası yok. Düzenli depolama yapacak baraj nehri bulunmuyor. Su fiziksel olarak Melen'e göre daha kirlidir. Melen'in baraj yapmaya elverişli bölgesi var.	The Sakarya River Basin has no suitable point for drawing water. There is no dam river suitable for regular storage. Physically, the water is dirtier compared to Melen. There is a suitable area for building a dam.	Ecological Distribution	2011	Government	Video news
17	Şehir [İstanbul] muhakkak yedekli kalmalıdır, İstanbul'un şu anki barajları kriz anında yetersizdir.	The city must always have a backup; the current dams in Istanbul are inadequate in a crisis.	Ecological Distribution	2011	Government	Video news
18	Bu proje bizim özgeçmişimizi silmek demektir. Benim hayatım satın alınmış olacak burada. Büyük stres çekeceğiz buradan gittikten sonra.	This project means erasing our history. My life will be sold here. We will suffer great stress after leaving here.	Recognition	2011	Resident	Video news
19	Buradaki rahatlığı başka yerde bulamayacağımızı biliyoruz. Evimiz, yerlerimiz, bostanımız kalacak. Nereye gideceğimizi bilmiyoruz.	We know that we won't find comfort like this elsewhere. Our homes, lands, and gardens will remain behind. We don't know where we will go.	Recognition	2011	Resident	Video news
20	3 dönüm yerimizi aldınız, 12 dönüm yerim dışarda kaldı. 3 dönüm yerin parasını çay parası yapar harcarım, bir şey alamam. Diğer parayı da verirlerse o zaman buraya baraj yapmaya gelsinler.	You took 3 acres of our land; 12 acres remain outside. The money for 3 acres is barely enough for tea expenses, I can't buy anything. If they give me the rest of the money, then let them come and build the dam here.	Economic Distribution	2011	Resident	Video news
21	Diyelim 1-2 dönüm yerim var. Nereye gideceğim belli değil. Gittiğim yerde aynı işimi yapabilecek miyim? Bize bilgi vermediler.	Let's say I have 1-2 acres of land. I don't know where I will go. Will I be able to do the same work where I go? They didn't give us any information.	Economic Distribution	2011	Resident	Video news

22	İnsanlar belirsizlikten evlerine bir çivi dahi çakamıyorlar. Bu insanların ihtiyacını devlet görecek de insanları yerleştirecek mi?	People can't even drive a single nail into their homes due to uncertainty. Will the state take care of these people's needs and resettle them?	Recognition	2011	Resident	Video news
23	Vatandaş olarak tedirginiz. Projeyle ilgilenen yetkililerden, Çevre Bakanı'ndan gelip halkımızı toplayıp en azından bilgilendirme amaçlı projenin ne aşamada olacağının, halkın nerelere ne şekilde yönlendirileceğinin anlatılmasını istiyoruz.	We are worried as citizens. We want the officials interested in the Project, the Minister of Environment, to come and gather our people and at least about the stage of the Project, where and how the public will be directed.	Participation, Recognition	2011	Resident	Video news
24	Ülkemizde bir proje yapıldığı zaman (otoyol, hızlı tren, baraj) eğer büyük bir yatırım yapıyorsak kamulaştırma yapmak zorundayız.	When a project is undertaken in our country (highway, high-speed train, dam), if we're making a large investment, we must carry out expropriation.	Economic Distribution	2011	Government	Video news
25	Çok güzel tabiat harikası bir yer, toprağı çok verimli. İstanbul'a su verebilmek için buraları kamulaştırmak durumundayız.	It's a very beautiful natural wonder, the soil is very fertile. [But] It must be expropriated to supply water to Istanbul.	Ecological Distribution	2011	Government	Video news
26	Baraj yapılsaydı çocuklarımızla gezmeye giderdik belki ama yapılmadığı için mağduruz.	If the dam had been built, maybe we would have gone on trips with our children, but since it wasn't built, we are victims.	Ecological Distribution	2023	Resident	In-depth interview
27	Köyde fındık bahçelerimiz vardı ve geçimi hayvancılıktan sağlıyorduk.	We had hazelnut orchards in the village, and we made a living from livestock farming.	Economic Distribution	2023	Resident	In-depth interview
28	2014 yılında meydana gelen köy yıkımı sonucunda dönem bedeliyle 110 bin TL kamulaştırma bedeli aldı bazı kişiler. Kamulaştırma bedeli tahsil edilemeden köylüler zorla evlerinden tahliye edildi, elektrik ve su kesintileri yaşandı. Ev bulamayanlar ve mağdurlar bölgede kaldı. Evleri yıkılan köylülere Toplu Konut İdaresi Başkanlığı (TOKİ) tarafından evler yaptırıldı ancak evler 50 bin TL'ye satılmaya çalışıldı. Fındık bahçeleri ve iki katlı evleri olan köylüler, şehir hayatında ve asgari ücretle yaşamak zorunda kaldı.	Due to the destruction of the village in 2014, some received a compensation payment of 110,000 TL. Before they could collect the expropriation money, the villagers were forcibly evicted from their homes, and electricity and water were cut off. Those who couldn't find homes and those who were victims remained in the area. The houses of those whose homes were demolished were built by the Housing Development Administration (TOKİ), but the houses were offered for sale at 50,000 TL. Villagers with hazelnut orchards and two-story houses were forced to live in the city on a minimum wage.	Economic Distribution	2023	Resident	In-depth interview
29	Süreç geç yönetildiği için bu insanlar kamulaştırma bedellerini aldıkları zaman ilçeye çok az yerleştiler. Karasu, Düzce, Hendek, Adapazarı, İzmit, Akçakoca civarlarında yer ev ve konut aldılar, fındıklık aldılar.	Due to the process being managed poorly, when these people received their expropriation money, very few settled in the district. They bought homes and hazelnut orchards in places like Karasu, Düzce, Hendek, Adapazarı, Izmit, Akçakoca.	Economic Distribution	2024	Media	In-depth interview
30	Gündeme İstanbul'un su sorunu veya buradaki halk gelmedi.	Istanbul's water problem or the local population here never came to the agenda.	Recognition	2024	Media	In-depth interview
31	Ekonomik savrulma yaşayan insanlar ellerinde hiç göremeyecekleri bir para ile karşılaştılar.	People experiencing economic turmoil were confronted with money they could never have seen in their lifetime.	Economic Distribution	2024	Media	In-depth interview
32	Kamulaşma bedeli alan insanların %80'i çeşitli nedenlerle mağdur durumdadır – kendi hataları da oldu ama esasen yerel ve merkezi hükümet bu sürecin nasıl yönlendirileceği konusunda gerekli çalışmaları yapmadı. Yani insan insan odaklı uzun vadeli yönlendirme sağlanmadı.	80% of the people who received compensation for expropriation are in a disadvantaged position for various reasons—their own mistakes played a role, but fundamentally, local and central governments did not carry out the necessary work on how to	Recognition	2024	Media	In-depth interview

		guide this process. In other wors, no long-term, human-centered guidance was provided.				
33	Bölgenin sosyolojik yapısı protesto tarafında yeterli seviyede değil.	The region's sociological structure is not sufficiently conducive to protest.	Participation	2024	Media	In-depth interview
34	Atalarının yüzyıllardır yaşadığı yerden taşınmasının bedeli para ile ölçülemez. Bunun farkında olan insan sayısı çok azdı. "Keşke yerlerimizi geri verseler, parasını iade edip oturmaya devam ederdik," diyen köylüler oldu. Bilinç düzeyi yeterli olmadığı için, getiri ve götürülerini fark edemediklerinden, köylüler uzun vadeli zararları göz ardı etti.	The cost of relocating from the land where their ancestors lived for centuries could be measured in money. Very few people were aware of this. Some villagers said, 'If only they would give our land back, we would return the money and conitnue living there.' Due to a lack of sufficient awareness, since they could not perceive the benefits and drawbacks, the villagers overlooked the long-term damages.	Recognition	2024	Media	In-depth interview
35	Yaş almış Ortaköy beldeli insanlar farklı ilçelerde yaşıyorlar artık. Bu kişilerle görüştüğümüz zaman Ortaköy'deki dünyaya bakış ve ruh halleri ile şimdiki ruh halleri arasında çok büyük farklar var. Antidepresan kullanan kişilerin varlığından da haberdarız.	The elderly people of Ortaköy now live in different districts. When we talk to them, we notice a significant difference between their current mindset and the one they had while living in Ortaköy. We are also aware of those who have started using antidepressants.	Recognition	2024	Media	In-depth interview
36	Olabilecekleri tahmin eden siyasi partiler bu konulara eğildiler, ama bizim insanımız önce ben ne alıyorum konusunu önceliklendirdikleri için etkili olmadı.	Political parties (those who could foresee what might happen) focused on these issues, but since our people prioritized what they would receive first, it was not effective.	Recognition	2024	Media	In-depth interview
37	Kamulaştırılacak arazi problemi de oldu. 300 m koruma bandı alanı içerisinde kalan kamulaştırılan yerlerin dışında, arada kalan arazi sahipleri baya bir sorun yaşadılar. İlgili kurumlar fındık bahçelerine müdahale edilmesini istemediler, cezalar kesildi. En son yetkililer bu konuya müsaade etme durumunda kaldılar, çünkü projenin bu hali ile sürüncemde kaldığı için artık DSİ'nin kamulaştırdığı bölge dışında kalan bölgelerde "mutlak koruma bölgesi" denilen alanlarda insanlar kendi konutlarını yeniden yapmaya başladılar.	There was also a problem with the land to be expropriated. People who owned land within the 300-meter protection zone experienced significant problems outside of the expropriated areas. The relevant authorities did not want any intervention in the hazelnut orchards, and fines were issued. In the end, they allowed this issue because, with the current state of the project dragging on, people started to rebuild their homes in areas outside the region expropriated by the State Hydraulic Works (DSİ), which was labeled as a 'strict protection zone.'	Ecological Distribution	2024	Media	In-depth interview
38	Burada su tutulduğu zaman, Kocaali'nin baraj suyu yakınında olan ancak hala yerleşim bulunan köylerde fındık üretiminde sorunlar yaşanacaktır.	When the water is retained here, it will cause problems for hazelnut production in the villages along the streams in the Kocaali region, particularly in those near the dam but still have settlements.	Economic Distribution	2024	Media	In-depth interview
39	Buharlaşma ile soğuk bir araya geldiğinde fındık üretiminde verim konusunda %60-70'lere varan bir zaiyatı olacaktır.	When evaporation combines with cold, there will be up to 60-70% loss in hazelnut production.	Economic Distribution	2024	Media	In-depth interview
40	Melen çayı Karadeniz'e dökülüyor. Karadeniz kıyısındaki köylerde sadece fındık değil, mısır ekimi de yapılıyor. Karadeniz suyunun rüzgarla zaman zaman iç kesimlere ilerlemesine karşı önlem alınmazsa, bu durum fındık ve mısır mahsüllerini etkileyecek ve köylerin çevresindeki arazilerin	The Melen River flows into the Black Sea. In the villages along the Black Sea, not only hazelnuts but also corn is grown. If precautions are not taken against the wind sometimes pushing the Black Sea water inland, it will affect the hazelnut and corn crops, and there are academic studies suggesting that the lands around the villages will no longer be suitable for agriculture.	Ecological Distribution	2024	Media	In-depth interview

	artık tarıma elverişli olmayacağına dair akademik çalışmalar bulunmaktadır.					
41	Kamu ile gerekli bilgi akışı, yerel halkın anlayacağı şekilde aktarılmadı. Teknik bilgiler yoğunlukla verildi. Kulaktan dolma bilgilerle süreç içerisinde insanlar kontrol edilmeye çalışıldı. Bu etik değil. ÇED raporu sunumu Ortaköy'de yapıldı, fakat konular teknik dille ifade edildiği için insanlar pek anlamadı.	The necessary information was not conveyed to the public in a way they could understand. The focus was mainly on technical details. People were controlled during the process through hearsay information. This is not ethical. The environmental impact assessment (EIA) report presentation was also made in Ortaköy, but since the topics were expressed in technical language, people did not understand much.	Participation	2024	Media	In-depth interview
42	İnsanların kültürel varlıkları konusunda erozyona uğratıldı. Yüzyıllardır olan yaşam alışkanlıkları ellerinden alındı, fakat bir arada yaşayabilmeleri hususunda hükümet bir girişimde bulunmadı.	People's cultural heritage has been eroded. Their centuries-old living habits were taken away, but no government initiative was made to ensure they could continue living together.	Recognition	2024	Media	In-depth interview
43	Devlette "Paralarını almadılar mı?" algısı var devlette. Ama insanların sonra nelerle karşılaşacakları konusunda bir fikirleri yoktu.	There is a perception in the government that 'Didn't they take their money?' But people had no idea what they would face later on.	Recognition	2024	Media	In-depth interview
44	Toplum hazırlanmadı, devlet organizasyon birimleri devleti devlet yapan ağırlıkta hareket etmedi.	The society was not prepared; the state organizations did not act with the weight that makes the state a state.	Participation	2024	Media	In-depth interview
45	Vahşi yöntem denendi burada. Belirlenen kamulaştırma bedelleri üzerinden pazarlık yapıldı, "Kamulaştırılan yer dışında bölgelerim de var, onları da al ." diyip pazarlık yapanlar da oldu. Bu sefer 10 lira olan fiyat için alırım ama daha düşüğe alırım diye pazarlıklar yapıldı.	A ruthless method was tried here. Negotiations were conducted based on the determined expropriation values, and some said, 'There are areas outside the expropriated places, take them too,' and bargaining took place. This time, those who had previously received 10 liras made negotiations to get even less.	Economic Distribution	2024	Media	In-depth interview
46	İlçe halkı süreçten sonra bilinçlendi, doğru yöntemlerle halka doğru bilgiler aktarıldıktan sonra kimyasal OSB'ye karşı çıktılar.	The district residents became more aware after the process; after correct information was conveyed to the public through correct methods, they opposed the chemical organized industrial zone (OSB).	Participation	2024	Media	In-depth interview
47	Göçün bu kadar travmatik olduğunu bilmiyordum.	I didn't know migration was this traumatic.	Recognition	2024	Expert	In-depth interview
48	Bütün İstanbul su sistemi Melen'e dayalıdır.	The entire water system of Istanbul depends on Melen.	Ecological Distribution	2024	Expert	In-depth interview
49	Karadenize beslenen suyun %70'i alınıyor, regülatörlerle bu enerjinin taşınması mümkün değil.	70% of the water fed into the Black Sea is taken; it is not possible to transfer this energy with regulators.	Ecological Distribution	2024	Expert	In-depth interview
50	Güncelde barajın ne zaman biteceği ile ilgili halk iletişimimiz bulunmuyor. Her şeyi TÜBİTAK tarafından hazırlanan özel yükümlülüklere göre uyguluyoruz	We have no communication with the public about when the dam will be completed. We implement everything according to the special obligations prepared by TUBITAK.	Participation	2024	local government of istanbul	In-depth interview
51	Çoğumuzun yeri yurdu belli olmadı. 4'te 1'imiz bir yerlere sığındı. Geri kalan dağıldı.	Most of us do not know where our place is. A quarter of us took refuge somewhere; the rest scattered.	Recognition	2020	Resident	Video news

52	Şehre alışamadık, şehir bize göre değil. İnsanlar stresten duramıyor yerinde.	We couldn’t get used to the city; the city is not for us. People are so stressed they can't stay still.	Recognition	2020	Resident	Video news
53	Doğru çözüm İstanbul'un su havzalarını korumak, baraj çözüm olmayacaktır.	The correct solution is to protect Istanbul's water basins; building a dam is not the solution.	Ecological Distribution	2020	Expert	Video news
54	Melen'den [İstanbul'a] suyun getirilmesi daha yüksek maliyetli su teminine, [İstanbul'daki] insanların daha yüksek bedelle suyu temin etmelerine neden olacak.	Bringing water from Melen will lead to higher costs for water supply, causing people to pay more for water.	Economic Distribution	2020	Expert	Video news
55	Havzada yaklaşık 320.000 insan yaşıyor ve sanayi tesisleri de var. Bu deşarjlar Melen çayına yapılıyor bu da suyun kalitesini düşürüyor. Bu sebeple Melen Havzası'nı zaman zaman 3. veya 4.sınıf dediğimiz su kaynağı olma niteliği taşımayan havza kabul edebiliriz.	About 320,000 people and industrial facilities live in the basin. These discharges are made into the Melen River, reducing the water quality. From time to time, we can consider the basin as not being a water source of the 3rd or 4th class.	Ecological Distribution	2020	Expert	Video news
56	Ortaköy halkı olarak buradaki yerleşimimizin yeni yerde de devam etmesini istiyoruz, halk olarak tek istediğimiz bu. Mezarlarımız nereye ne şekilde gömülecek onu bile bilmiyoruz.	As the people of Ortaköy, we want our settlement here to continue in the new location as well. This is all we want as the public. We don’t even know where and how our graves will be buried.	Recognition	2014	Resident	Video news
57	Hepimizin elinde tebligatlar var, bir ay sonra evlerimizi boşlatmamız isteniyor.	We all received notifications; we are being asked to vacate our homes in a month.	participation	2014	Resident	Video news
58	Bizim mağduriyetimiz bir nebze evlerimiz olduğu zaman giderilmiş olacak, biz de devlete olan hakkımızı helal etmiş olacağız.	Our grievance will be alleviated to some extent when we have homes, and we will forgive our rights to the state.	Recognition	2014	Resident	Video news
59	Köy halkına beklediğinden daha çabuk boşaltma tebligatı geldi.	The village people received an evacuation notice faster than expected.	Recognition	2014	Resident	Video news
60	Bize tanınan çok komik bir süre, bir ay içerisinde evlerimizi boşaltmamız söyleniyor. İnsanların buna ön hazırlığı yok. Bize vereceklerini taahhüt ettikleri alanda işler istediğimiz hızda ilerlemiyor.	We were given a very short time, and we are told to vacate our homes within a month. People have no preparation for this. The work in the promised area is not progressing at the speed we want.	Recognition	2014	Resident	Video news
61	Yerimizden çıktığımız zaman bize verilen evlere yerleşeceğimizi hayal ederek bir çok şeyi sineye çektik.	When we left our place, we endured many things, dreaming that we would move into the houses that were promised to us.	Recognition	2014	Resident	Video news
62	Yerleşim konusunda devletimiz tarafından mağdur edilirsek, İstanbul’un içme suyunu değil 2041, 2071, kıyamete kadar İstanbul durduğu ve Melen aktığı sürece sağlayabilirsiniz. Ama bizim de helalliğimiz alınmalıdır.	The government may victimize us through the resettlement and provide Istanbul drinking water, not only until 2041 or 2071, but until apocalypse - as long as Istanbul stands and river flows. However, our consent must also be taken.	Recognition	2014	Resident	Video news
63	Köylerden apartmanlara taşınan insanlar çok zor durumda kaldı.	People who moved from villages to apartments are having a very difficult time.	Recognition	2024	Expert	In-depth interview
64	Köylülerin bir kısmı o bölgede yüzyıllardır yaşayan insanlarıydı ve aslen Hemşinlilerdi.	Some of the villagers were people who had lived in that region for centuries and were originally Hemşin.	Recognition	2024	Expert	In-depth interview

65	"Mezarlarımızı bile kaldıramadan apar topar bize köyü boşalttırdılar" demişti insanlar.	People said, 'They made us evacuate the village in a hurry without even allowing us to move our graves.'	Participation	2024	Expert	In-depth interview
66	Melen karşı olduğumuz ve yapılmaması gereken bir projeydi. Bir kent kendi su ihtiyacını karşılayamıyor, iki şehir sonra su temin ediliyor.	Melen was a project we were opposed to and should not have been carried out. A city cannot meet its own water needs, and then two cities down the line are being supplied with water.	Ecological Distribution	2024	Expert	In-depth interview
67	Bu suyun İstanbul halkı için bir bedeli var. Sermayenin "Nasılsa suyunuz var, o zaman havzalarınızı verin, biz de havzalarınızı yapılaşmaya açalım" diye yaklaşımı oldu.	This water comes at a cost to the people of Istanbul. The capital took the approach of 'Since you have water, then give us your basins so we can open them up for development.'	Ecological Distribution	2024	Expert	In-depth interview
68	Melenin suyu çok berekteli değil. 400 bin insan yaşıyor ve 6 milyon canlı hayvan var, burada da bir kullanım var.	Melen's water is not very abundant. Approximately 400,000 people and 6 million livestock live there; there is also usage there.	Ecological Distribution	2024	Expert	In-depth interview
69	Melen günü kurtaran bir proje. Geçici bir çözüm ve ortada baraj da yok.	Melen is a project that temporarily solves the problem. It is a temporary solution, and there isn't even a dam in place.	Ecological Distribution	2024	Expert	In-depth interview
70	İstanbul çaresiz hale getirildi, bunun da tek nedeni İstanbulun tüm havzalarının sermayenin rantına teslim edilmesidir.	Istanbul has been rendered helpless, and the only reason for this is that all of Istanbul's water basins have been surrendered to capital for profit.	Economic Distribution	2024	Expert	In-depth interview