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PROF. DR. SERTAÇ GÜNGÖR

ASSOC. PROF. DR. SEVAL ÖZGEL FELEK

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CHAPTER 1

TOURISM POTENTIAL OF TEA (CAMELLIA SINENSIS L.) AREAS; IN CASE OF EASTERN BLACK SEA REGION

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Introduction

Rural landscape areas are important in terms of ecosystem as well as visual and recreational aspects that connect urban areas and natural areas. Within the scope of these areas, forest areas, agricultural areas, gardens and other human-modified areas are included. Such landscape areas can be shaped according to traditions, customs and cultural structures. Rural settlements are also included in this landscape type (Uslu et al., 2004). Rural landscapes, which emerge according to the main occupations of people in rural areas, can be categorised into 4 groups with a general approach: forest landscapes, agricultural landscapes, industrial landscapes and recreational landscapes.

Agricultural landscape is a phenomenon that has emerged with the use of nature by human beings for their own purposes and has been continuing since the earliest ages, and in its simplest form, it is a phenomenon caused by activities aimed at meeting basic needs. In later stages, agricultural activities were continued to meet economic needs. However, in order for agricultural areas to be called landscape areas, they must be integrated with the ecological character of the areas where they are located and be sustainable. Agricultural landscape is shaped by the structural, functional and managerial characteristics of the area. These include natural factors such as topography, flora and fauna, geology, climate, soil, hydrology as well as ecosystem function and cultural structure. Agricultural landscape has qualities that visually relax people, protect nature and harmonise with the environment (Güneroğlu, 2013).

The effectiveness of agricultural landscape in Turkey is quite large and covers large areas. The fact that our country has wide variances in terms of main and transitional climate types and growing environments increases the product diversity in agricultural production. Accordingly, many different types of agricultural landscapes formed by agricultural cultures characterising various regions and localities emerge (Dirik, 2005; Gökalp and Yazgan, 2013).

Tourism can be defined as all social and cultural activities, excluding income-generating activities, including the process of travelling from one place to another in order to rest, sightsee and satisfy their curiosity. The duration of stay in the new destination is generally longer than 24 hours. The rapid changes occurring in the world also change people's recreational preferences and the field of tourism is also differentiated depending on the increasing income levels (Irmak, 2008). Classical sea, sun and sand tourism is being replaced by tourism types that prioritise nature. One of the most important of these is agricultural tourism activities (Figure 1). Examples such as Balinese rice fields and American pumpkin gardens are the main ones (Güneroğlu & Ercan Oğuztürk, 2019).

Figure 1. *Example areas for agrotourism activities (A:URL-1, B:URL-2)*

Agrotourism can be defined as the act of visiting a farm, garden or field for education, entertainment or recreation and participating in the activities there (Ainley and Smale, 2010). Agro-tourism has changed over time and has become an activity in which people who want to escape from the city life in the city today rent or buy rural areas for a short period of time (Butler et al., 1998). Agricultural tourism has been seen as a way of additional income for farmers or villagers who have income problems in rural areas (Oppermann, 1998). However, when rural tourism is mentioned, not only farm and village visits, but also visits to important natural areas, ecotourism, mountain hiking, climbing and horse riding should come to mind.

Canada, Australia, USA and New Zealand are the leading countries in the world that see rural tourism as an important source of income and invest in it. The USA has implemented projects to develop and encourage rural tourism on both state and national scales. Australia carries out similar activities to open its national and local resources to rural tourism. In the case of England, the Farm Holiday Bureau organises all activities related to rural tourism. Rural tourism attracts attention in countries such as Ireland, Italy, Austria and Scotland in the world (Irshad, 2010). Other countries with potential in terms of ecotourism include Peru, Indonesia and Nepal.

In order to develop ecotourism in Turkey, activities such as training of local people, promotion of cultural and traditional handicrafts, identification of important geographical points in eco-tourism areas, identification of walking routes, cadastral infrastructure works and preparation of land use plans of eco-tourism areas are included in tourism planning.

Although agrotourism has long been practiced in Europe and America, it has only recently started to gain importance in Turkey. In Turkey, holiday farms or agro-tourism activities are generally carried out with the contribution and guidance of farms engaged in organic agriculture and Buğday Ecological Life

Support Association. In the studies carried out within the scope of agriculture, tourism, holiday project, it has been stated that such farms are mostly operating in Eastern Anatolia; Erzurum, Erzincan, Black Sea; Artvin, Trabzon, Rize, Gümüşhane, Samsun, Sinop, Kastamonu, Amasya, Marmara Region; Yalova, Düzce, Çanakkale, Sakarya, Aegean Region; Muğla, Aydın, Manisa and Mediterranean Region; Isparta, Burdur, Antalya and Afyon (Yılmaz, 2008). In our country, there are many products such as olive, sunflower, tea, hazelnut, rose, lavender, cotton and apricot, which are identified with the geography, have gained cultural value and have tourism potential (Güneroğlu and Bekar, 2016).

Corn, beans, tea and hazelnuts are the most common crops grown in the Eastern Black Sea region. However, among these products, tea and hazelnuts stand out with their potential to be used for agricultural tourism purposes. Tea cultivation in the Eastern Black Sea region is not only economically valuable for the region, but also has natural, cultural, aesthetic, health, sustainability and tourism value and gives the region a special quality (Güneroğlu and Acar, 2016). Therefore, in this study, the general characteristics of the tea plant were examined and alternative tourism opportunities for the Eastern Black Sea region were investigated.

Dendrological Characteristics

The botanically valid name of the tea plant is *Camellia sinensis* L. (synonym= *Thea sinensis* L.). It belongs to Theaceae family. The evergreen and long-lived tea plant can reach a height of 15 metres in natural growth environments. The species cultivated for intensive cultivation are developed vegetatively between 60-100 cm (Figure 2). The lifespan of such tea plantations varies between 60-70 years (Bayram, 2012). Tea plant is a plant that shows a lot of branching and has side roots formed around a main root (Abanuz, 2007). The stem of the tea plant is mostly brown or dark brown in colour. There are many bud eyes on the dense branch structure. The first shoots are green, but as the branches thicken, the colour approaches darker tones. The tea leaf is 5-15 cm long, 2-5 cm wide, narrowly elliptical, dark green with a pointed tip and toothed edges. It has a 6-15 mm long stem and the leaves are hairy on the underside when fresh. The flowering time of the tea plant varies according to the type and growth environment. In tropical regions, flowering can last all year. The showy flowers are 2-3 cm long, with white petals and 2-3 of them can be found together. The fruit is 2-3 cm spherical or appears to be formed by fusion of 2-3 spheres and is green before ripening and purplish green when ripe. The fruit opens after ripening and 1-6 spherical black seeds with a diameter of 3-5 mm fall out (Ağca, 2007; Mamıkoğlu, 2007).

Figure 2. *Images of Camellia sinensis L. (Original)*

Growing Environment Requirements

Tea plant generally grows in areas with temperate climatic conditions with an average annual precipitation of over 1200 mm, 70% humidity and an average temperature of 14 0C (Usta, 2005). In general, when the areas where tea is grown on a world scale are considered, it is seen that tea is mostly grown in areas with semi-tropical characteristics (Başer, 2006). Tea grows better in acidic soils with pH values between 4,5-6.

History

The history of tea dates back to 2700 BC. In these years, tea was mostly used by boiling wet tea for therapeutic purposes (Ağca, 2007; Bayram, 2012) (Figure 3). In 780 A.D., the first book on tea was written and it was seen that tea could be dried and drunk. In the following period, tea started to spread to other geographical points. It is believed to have been introduced to Japan by Buddhist monks. Buddhist monks believed that tea was a divine drink for them and that it gave them divine powers. It is stated that the trade voyages of Dutch sailors in the 1610s were effective in bringing tea to Europe (Figure 3). Later, it spread all over Europe in the 17th century.

Figure 3. *Images related to first tea uses (URL-3)*

The most important initiative related to tea cultivation in the Black Sea region was the assignment of Ali Rıza Erten in 1917 to carry out research on the subject and as a result of this study, it was stated that the Eastern Black Sea region was suitable for growing tea and citrus fruits in terms of climatic conditions (Başer, 2006). In order to be a source of income for the people of the region and to prevent migration, a law on tea cultivation in Rize and its neighbourhood was adopted by the Turkish Grand National Assembly in 1924. In accordance with the adopted Law No. 407, tea saplings were distributed to the people of the region, provided that they had to be planted within 3 years, and the existing alder trees were asked to be removed (Usta, 2005; Başer, 2006). After this stage, tea planting developed with the support of the state and Zihni Derin, the agricultural inspector of the time, made important contributions in the region (Ağca, 2007).

Distribution and Production

In terms of world tea plant cultivation, China is the world's largest producer. Among the other countries ranked in terms of production volume; India, Sri Lanka, Indonesia, Pakistan, Japan and Russia are also engaged in tea cultivation Other countries outside the major producers include Colombia, Australia, Malaysia, Burma, Vietnam, Ethiopia, Cameroon, Peru, Mozambique, Nepal, Taiwan, Argentina and Turkey (Figure 4). The total area of tea cultivation in the world in 2021 is 5.2 million hectares. Approximately 64 per cent of the total area is in China and 10 per cent in India. Turkey ranks 4th in terms of dry tea production and 8th in terms of tea area size (Table 1) among the producing countries in the world in terms of the width of tea cultivation areas.

Figure 4. *Examples from countries where tea is cultivated (Güneroğlu, 2013) Worldwide tea production (URL-4)*

Table 1. *World tea areas (thousand ha) (Erdal, 2023)*

	Countries	**2021**
1	China	3.379
2	India	548
3	Srilanka	267
4	Kenya	250
5	Indonesia	112
6	Vietnam	110
7	Myanmar	96
8	Turkey	82
9	Other Countries Total	402
	General Total	**5.245**

In Turkey, tea cultivation is carried out in the geographical area from the Georgian border to Ordu province, mainly in the Eastern Black Sea (Figure 5). The areas where tea is cultivated, especially Rize and Trabzon, which extend approximately 1000 m altitude and 8 km inland from the sea, are the areas where the most tea is produced. Apart from these, the amount of tea produced in Giresun, Ordu and some parts of Artvin is less than Trabzon and Rize. In the area considered as the first class tea region, 67% of the tea areas are located in Rize, 19.1% in Trabzon, 11.6% in Artvin and 2.1% in Giresun (Table 2).

Figure 5. *Cities where tea is grown in Turkey*

Due to the unique climatic requirements of the tea plant, tea production in Turkey can be grown in the Eastern Black Sea region described above. In addition, since the time required for the harvesting and processing of the tea plant is short, it is necessary to spend this process in the facilities located in the region. Thus, for the Eastern Black Sea region, tea cultivation has become the determinant of daily life activities in the region between May and October.

So much so that people have indexed their socio-cultural activities such as holidays, weddings and illnesses to the harvest season of this plant.

Table 2. *Distribution of tea areas by cities (Erdal, 2023)*

Cities	Tea Area (Thousand Decare)	%	Producer Quantity (Thousand Tonnes)	%
Artvin	92	11,6	135	10,6
Rize	531	67	821	64,7
Trabzon	152	19,1	287	22,6
Giresun	17	2,1	27	2,1
Total	792	100	1.270	100

Tea Tourism

Tea tourism is a type of tourism caused by interest in history, traditions, customs, tea production and consumption. Tourists who experience culture, tradition and history for tea consumption are called tea tourists (Jolliffe, 2007). Within the scope of tea tourism, there are activities such as visiting tea museums, tasting tea, travelling in tea fields, taking photographs, buying tea products (Güneroğlu, 2013).

Tea tourism is important in many countries where tea is cultivated in the world. Especially in China, the homeland of tea, tea tourism is very valuable. Tea-related activities such as tea museums, tea tasting, tea collection, tea festivals, exhibiting and selling tea materials are quite high. Spa centres have been established in hotels using the therapeutic properties of tea. In Sri Lanka, hotels have been built in tea plantations, creating both effective visuals of the plantations and opportunities to experience the traditional lifestyle. Especially old tea factories are converted into hotels and used for touristic purposes. In India, it is seen that there are touristic activities such as tea picking, tea tasting, and interaction with local people (İskender, 2020).

The tea gardens in Yongfu town of Longyan in Fujian province of East China and the visual feast of cherry blossoms blooming on the roadsides attract many tourists (Figure 6). Tourists can take a walk among these tea areas and experience the wonderful scenery at the photo spots.

The city of Darjeeling in the Indian state of West Bengal is one of the most famous tea estates (Figure 7). Since Darjeeling tea is famous, this place is now identified with these tea gardens. Tourists can rent a small house in these gardens and explore the surroundings. You can visit the tea fields and the magnificent views. They can also experience the natural process of tea making from collection to production.

Figure 6. *Tea garden and cherry trees in Fujian (A:URL-5, B:URL-6)*

Figure 8. *Darjeeling tea garden and train tour (URL-7)*

Tea Tourism in Turkey

As there are many examples in the world, tourism activities are carried out in areas where tea is cultivated in Turkey. In Rize province, where tea production is the highest, there is an exemplary tea garden (Haremtepe-Çeçeva), a tea museum and a tea house in the newly built airport for tea tourism (Figure 9). Apart from these, the tea glass object draws attention as an identity element in the city. In addition, the ziraat tea garden is a green area that attracts the attention of tourists. Apart from these, tea festivals are organised in the region. Tea gardens and factories are visited to experience the tea production process and tea tasting can be done by getting information about tea production. Tourists can buy tea produced in the region and various souvenirs related to tea.

Figure 9. *Rize Tea Museum (A: URL-8), Rize Airport Tea House (B: URL-9), Çeçeva Tea Field (C: URL-10), Tea Glass Object (D: URL-11), Rize Airport Tea Glass Tower (E: URL-12), Rize Ziraat Tea Garden (F: URL-13)*

In addition to these, various studies should be carried out for the development of tea tourism in the region. Firstly, suitable areas to be opened for tea tourism should be determined. Carrying capacity should be taken into consideration for these areas. Walking routes exhibiting various views should be created and photo shooting points should be established. More aesthetic views can be created by paying attention to the spring flowering and autumn colouring of the plants found individually or in groups within the tea areas (Figure 10). Especially the autumn blushing of *Diosprus* spp. species, which are abundant in the region, and the consumption of their fruits are quite high. Apart from these, the aesthetic appearance of fruit trees such as plum, apple and cherry, which are abundant in the area, with their white and pink flowers in spring and the use of their fruits as food are important. With the plans to be created by determining the morphological characteristics of these species

and the periods when they exhibit these characteristics, different images that tea areas can have in every season will be created. In this way, it will be ensured that tea areas are used for tourism purposes and attractive areas in all seasons.

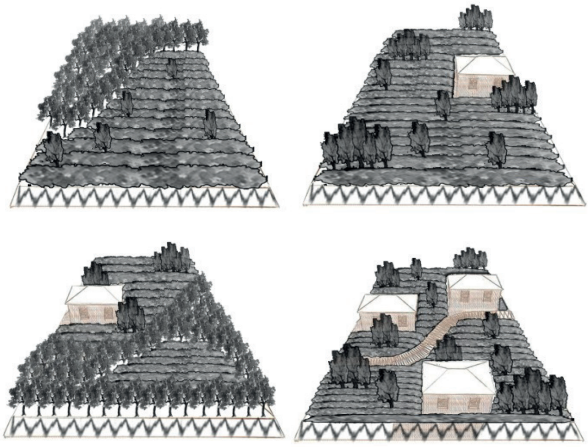

Figure 10. *Plant design suggestions for tea gardens (Güneroğlu, 2013)*

Areas where the traditions and customs of the region can be experienced should be created at suitable points, traditional architecture should be included and tea hotels should be built. Places where tea tasting and local flavours can be experienced should be created. Collecting tea, observing the tea production process, visiting tea production places, listening to the story of tea should be designed as the main activities for tourists. Areas where local products can be introduced and purchased should be built. These should be planned to operate not only in May-September, which is the tea cutting season, but also in every period of the year.

In order to realise all these studies, management decisions should be taken and implemented by the state and the public should be encouraged to do so. Far Eastern countries can be taken as an example in this field. These studies should be based on environmentally harmless and sustainability without deteriorating the quality of natural resources. One of the basic steps in the realisation of all these works is the promotions to be carried out by using press and broadcasting resources. With these studies, the potential of agricultural tourism in the region can be increased. With the plans to be realised in accordance with these targets, integrity will be ensured, habitats and biodiversity will be protected, yield, profit and production will increase.

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CHAPTER 2

THE IMPACT OF CLIMATE CHANGE ON FLOOD AND FIRE DISASTERS: THE CASE OF MARMARIS

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INTRODUCTION

Every year, our society is impacted by new hydrological extremes that shatter records, which intensifies the argument between climate change and natural climate variability (Alfieri et al.,2015). The number of floods in Europe and worldwide has significantly increased in recent years, mainly due to people and economic assets accumulating in high-risk areas (Kreibich et al., 2015). In the last 30 years, the effects of climate change have become more apparent worldwide. The Intergovernmental Panel on Climate Change (I.P.C.C.) reported in its Fifth Assessment Report that, between 1880 and 2012, the average global land and ocean temperature increased by 0.85 °C, with the years 1983 to 2012 being the warmest in the last 800 years (Tang, 2019). As a result, the effects of climate change are now more apparent. The unusual and regular occurrence of floods, storms, droughts, and fires are a few examples of these effects. Furthermore, precipitation, sea level rise, drought, volcanic activity, hurricanes, loss of biodiversity, increased storm severity, frequent heat waves, changed rainfall patterns, reversals of ocean currents, flooding, and their extremes are among the climatic occurrences linked to global warming (Booth et al., 2012).

The impacts of climate change are observed in different fields and sectors, such as agriculture, food, energy, health, economy, and urban areas. Climate change is recognized as the most widespread problem affecting the social sphere, the natural environment, and the human system, with risks and damages to the built environment. Climate change has negative impacts on the construction sector as a result. In the context of residential buildings, these effects are as follows: energy consumption of houses in the future will increase in terms of cooling energy and cost with increasing temperatures, uncomfortable situations will arise with increasing temperatures and precipitation in indoor comfort conditions, and the adverse effects of extreme heat and precipitation anomalies on the shells of residential buildings change according to material type and location (Sarıcıoğlu et al., 2022).

For this study, climate change effects on building and urban areas are restricted to fire and flood disasters. For this reason, when examining the literature, there are several studies about these effects and consequences. In addition to long-term, gradual climate change, extreme weather events like powerful storms and flooding pose immediate threats to the construction industry. Rising average temperatures and shifting precipitation patterns threaten buildings and real estate (Alzahrani, 2015). Bello et al. (2018) provided a literature review examining the effects of flooding caused by climate change on buildings in Nigeria. After the study, they recommend that all parties involved in the built environment work together to replicate the successes of Nigeria's flood adaption strategy to climate change in order to create a sustainable built environment. Using built defenses

to prevent and lessen the impact of floods on the built environment, raising river banks and flood walls, constructing sufficient storage reservoirs and channeling the flood passage, and installing standard drainage systems on roads are the main strategies for adapting to floods (Bello et al., 2018). In a different study, Claudia (2014) said that to endure bad weather, new building techniques and materials are required for flooding, coastal erosion, subsidence, and drainage systems (Claudia, 2014).

Another effect of climate change is fire risk. According to the World Wide Fund for Nature (W.W.F.), forests are home to 300 million people worldwide and 80% of terrestrial biodiversity, so 1.6 billion people depend on them for their livelihoods. Forest fires are already threatening entire continents. Droughts and rising temperatures have led to economic and life losses and threats to animals and plants. As deforestation increases due to increasing heat and drought, there will be a danger of loss and reduction of forested areas. Under a low-emission scenario for Turkey, the whole country could experience a general increase in fires in areas dominated by Mediterranean scrub and forests. This trend is also emphasized under a medium emission scenario (C.M.C.C., 2021).

There were 8274 natural catastrophes in Turkey between 2010 and 2021 that had meteorological characteristics, according to the report written by the General Directorate of Meteorology (2022). Storms accounted for 32% of these calamities, followed by severe rain/floods (31%) and hail (17%) (Kahraman ve Polat, 2022). According to the same report, following İzmir, Muğla province in the Aegean area will have the most disasters between 2010 and 2021. This is why the natural disasters that have occurred in Marmaris are used in this study to examine the consequences of climate change using the data gathered from the literature. Climate change would affect the frequency and intensity of these disasters, according to an analysis of the Marmaris catastrophes that happened between 2015 and 2022 and caused damage and their effects. In this regard, it is thought that the study will attract attention to the influence of climate change on disasters and may be a basis for relevant people and institutions.

1. GENERAL SITUATION OF MUGLA PROVINCE AND MARMARIS

Muğla province is located in southwestern Turkey between 36˚ 17’ - 37˚ 33’ north latitude and 27˚ 13’ - 29˚ 46’ east longitude. Located on the Aegean coast, Muğla’s sea border is more than its land border. It is neighboring the provinces of Aydın, Denizli, Antalya and Burdur (Örücü and Ceylan, 1995: 2). As of 2016, there are 13 districts. These are Bodrum, Dalaman, Datça, Fethiye, Kavaklıdere, Köyceğiz, Marmaris, Menteşe (central district), Milas, Ortaca, Seydikemer, Ula and Yatağan. The location of Muğla Province on the map of Turkey is shown in **Figure 2** (Ekinci, 2016).

Figure 2. *Geographical location and borders of Muğla province (Ekinci, 2016).*

Marmaris is surrounded by Ula to the north, Balan Mountain, Karadağ and Günlük Hills to the east, Datça Peninsula and Kerme Bay to the west, and the Mediterranean Sea to the south. Adaköy, connected to the coast with a thin tongue, is located in front of the bay, and in front of it are Sedir Island, Goat Island, and Pigeon Island. The castle neighborhood is the oldest part of the city, built on a hill and extending towards the sea. The development of Marmaris has been along the coast and towards the foothills over the years. Dalaman Airport, where air transportation is made, is only one hour away. Rhodes is only 45 minutes away **(Figure 3)** (URL 2).

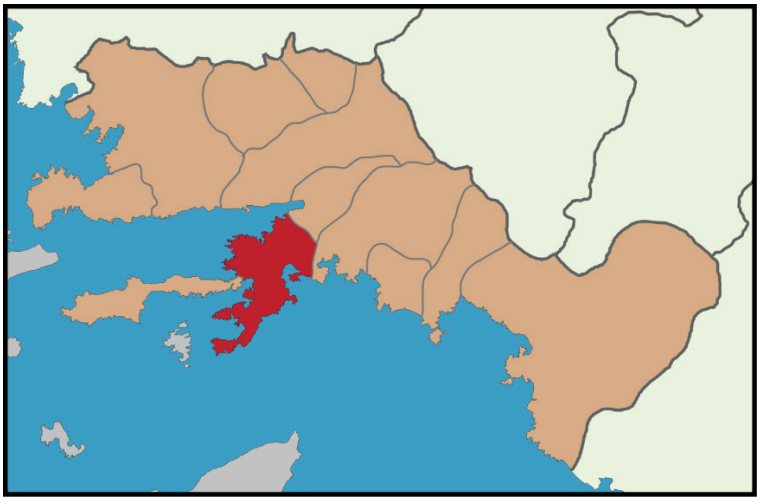

Figure 3. *Geographical location of Marmaris district in Muğla province (URL 2-3)*

1.1. Climatic and Topographical Characteristics of Marmaris District

Due to the elevation of Muğla province (646m), snowfall and frost events are more common than in Marmaris and Köyceğiz. However, especially since the early 2000s, snowfall has started to decrease frequently, which is the result of climate change (Balcıoğlu, 2021). Marmaris is the region's center with the highest rainfall (1228 mm). The direction of the mountains in Marmaris and their position relative to the sea are effective in receiving so much precipitation. The mountainous and hilly areas are close to the coast, and the settlement appears to be a lowland and closed bay. The lowland area in Beldibi, which is about 4 km inland at most, is located on the northeast side of Marmaris. The abundant rainfall in Marmaris, especially in the winter, is because the mountainous areas with elevations approaching 1000 meters meet the incoming humid air. Balaban Mountains (999 m) on the east-northeast side of the settlement and Palamut Mountain (850 m) on the south-southwest side are especially effective in meeting the humid air masses coming from the west and south and in the formation of orographic precipitation. The hills to the west, which do not exceed 300 m in height, allow the humid air coming from here to move forward. Marmaris has a corridor opening to the Mediterranean Sea with straits in the southern part, and the highest points on the Cennet Tombolo in this part do not exceed 400 meters (Balcıoğlu, 2021).

2. CLIMATE CHANGE AND FIRE RISK

With climate change, increasing temperature, drought, and continuous heat waves increase the number of forest fires and areas exposed to fire (Bayazıt and Koç, 2022). Although many factors affect the start and spread of forest fires, climate and weather conditions are among the most important. The number of fires and the amount of forest area burned are significantly higher when air temperatures increase, whereas precipitation decreases and air humidity decreases. The intensity of winds also increases the speed of fire spread. For this reason, as a result of climate change, the increase in the frequency of heat waves, the rise in temperatures, and the intensified summer droughts cause the fires that have already started to be much more severe and affect large areas due to the drying of flammable materials and the decrease in the ignition temperature (Türkeş and Tolunay, 2023). According to the research done by Marmaris and İçmeler (Bayazıt and Koç, 2022), erosion and flooding were brought on by forest fires in 2021. As a result, it was determined that following the 2021 forest fires, the study area's flood extent rose by 12%.

Additionally, it was estimated that soil losses would rise by 27.28 t/ha annually. The study's findings demonstrated that forest fires kill local species and result in secondary calamities like erosion and flooding. There is a

theory that as global warming increases the frequency of severe temperature occurrences, more forest fires will occur worldwide. The study highlights the possibility of secondary disasters resulting from forest fires. As a result, it is believed that nations ought to respond to global warming as quickly as feasible (Bayazıt and Koç, 2022).

2.1. Climate Change And Flood Risk

As Turkey is located semi-arid, water resources are strategically important. Agriculture, health, and water resources need more climate indices to know how extreme climates affect their operations. The information about extremes is usually embedded in meteorological data, and only with the help of indices does the data become more visible and understandable in terms of extremes. Şensoy et al. (2019) found a decreasing trend in the number of consecutive dry days (C.D.D.), consecutive wet days (CWD), total annual precipitation (P.R.C.P.T.O.T.), R10mm and R20mm indices in Muğla, Fethiye, and Marmaris in their study with daily precipitation data covering the years 1960-2017. Daily maximum rainfall (RX1day) has an increasing trend in Marmaris (Şensoy et al., 2019).

Flooding is one of the additional consequences of climate change. An anticipated rise in the frequency of (climate-driven) risks (in the case of floods) and increased exposure in sensitive places are to blame for the predicted increase in losses. Buildings can be more structurally resilient to fluvial flood damages by elevating door and window openings, making buildings floodable, and strengthening the foundation, walls, and frame. These are common strategies that have been acknowledged in the literature. A building's material composition also plays a significant role in determining how vulnerable it is to physical flood damage. For instance, employing soil increases a building's susceptibility to floods (de Ruiter et al., 2021).

Unexpected floods in prior years have validated the forecasts for the Marmaris district. Based on an analysis of the extreme precipitation events that have occurred in recent years, a limit of more than 50 mm of precipitation in 30 minutes is observed. The significance of short-term flash floods in cities becomes evident when one considers that in 2050, 80% of the world's population will reside in urban areas. Upon analyzing the complete data set spanning several years, Marmaris emerges as one of the locations with precipitation records **(Table 1)** (Çelik et al., 2017).

Table 1. *Amounts at 30 and 1440 minutes for the heaviest rainfall recorded in recent years in some centers* **(G.D.M) (Çelik et al.,2017).**

DATE	*LOCATION*	*TIME*	*AMOUNT (mm)*	
			30'	**1440'**
18.11.2007	Bodrum	0829/0859	50.5	62.8
18.11.2007	Marmaris	1052/1122	50.1	131.2
08.09.2009	Bandırma	1135/1205	41.8	243
08.09.2009	Çatalca	1019/1049	57	205
22.09.2012	Hopa	0222/0252	42.9	340.5
20.05.2015	İzmir	1220/1250	57.3	
21.08.2015	Etimesgut	1429/1458	51.4	64.2
24.08.2015	Hopa	0732/0802	64.9	221
12.11.2015	Borçka	0616/0645	15.8	174 (290)
28.05.2016	Ünye	0238/0307	51	245
01.09.2016	Hopa	0622/0645	41	240
01.09.2016	Fındıklı	0736/0806	45.8	270
20.09.2016	Zonguldak	1949/2019	50	
21.09.2016	Beşikdüzü	0854/0924	64.3	272
08.06.2017	Gerede	1235/1305	52.4	
17.07.2017	Bayramiç	2155/2225	64.8	165
18.07.2017	Silivri	0530/0600	60.3	136
18.07.2017	Üsküdar	0527/0557	37.7	117

Flood damage needs to be minimized in places where towns or villages are already located in areas prone to flooding. Prior research has demonstrated that private houses and companies can effectively mitigate flood damage by implementing construction adaptation, mobile flood barriers, and contaminated source control (Kreibich et al., 2015).

3. METHOD AND CASE STUDY

The study used reports, theses, and news articles from the literature review to gather data on the catastrophes in Marmaris between 2015 and 2021. The data was then broken down into categories such as flood and fire. Muğla Province has 15 Disaster-Prone Areas Decision taken by the Council of Ministers. As seen in **Table 2**, these disasters are mainly landslides and rock falls, but floods, floods, tsunamis and earthquakes are also experienced in the region.

Table 2. *List of Rockfall and Landslide Disaster-Prone Areas of Muğla Province (AFAD, 2021).*

	PROVINCE	COUNTY	VILLAGE	DISTRICT	TYPE OF DISASTER	DATE OF REPORT
1	MUĞLA	YATAĞAN	BAĞYAKA	CENTRAL	LANDSLIDE	25.02.1999
2	MUĞLA	KAVAKLIDERE	ÇAYBOYU		LANDSLIDE	14.06.2019
3	MUĞLA	KAVAKLIDERE	MENTEŞE		LANDSLIDE	14.06.2019
4	MUĞLA	SEYDİKEMER	ÇATAK		LANDSLIDE	10.12.2018
5	MUĞLA	CENTRAL	CENTRAL		ROCK FALL	
6	MUĞLA	ULA	GÖKOVA	KOZLUKUYU	ROCK FALL	23.10.2018
7	MUĞLA	BODRUM	GÜNDOĞAN	YUKARI	ROCK FALL	25.07.2018
8	MUĞLA	ORTACA	GÖKBEL	KIZILCAPINAR	LANDSLIDE	12.02.2012
9	MUĞLA	FETHİYE	BAĞLIAĞAÇ		LANDSLIDE	03.04.2012
10	MUĞLA	FETHİYE	DEREKÖY		LANDSLIDE	05.12.2011
11	MUĞLA	MİLAS		ÖREN DISTRICT	ROCK FALL	10.02.2015
12	MUĞLA	DALAMAN		ÇÖĞMEN DISTRICT	LANDSLIDE	20.04.2015
13	MUĞLA	SEYDİKEMER	ARSAKÖY		LANDSLIDE	11.03.2019
14	MUĞLA	CENTRAL	KUZLUK		LANDSLIDE	25.02.1981
15	MUĞLA	KÖYCEĞİZ	YAYLA	YAYLA AMB	LANDSLIDE	13.05.2014 / 14.08.2017

3.1. Flood and Fire Disasters in Marmaris

On February 3, 2015, a landslide occurred in Marmaris due to the torrential rains that have continued intermittently for a week in the district. As a result of the landslides in two regions, the highways were closed to traffic, and no vehicles passed by during the incident, preventing any possible injury or loss of life. On February 24, 2015, flood and landslide disasters occurred in Marmaris due to torrential rains for two consecutive days. After the downpour, floods occurred in Hisarönü and Karacasöğüt neighborhoods. In Karacasöğüt, many vegetable and strawberry greenhouses were damaged, while houses and summer residences were flooded. In the Bayır locality of the neighborhood, the retaining wall of a house garden collapsed. In addition, agricultural lands and gardens of houses were flooded due to floods in the Değirmenyanı locality of Hisarönü. At the same time, highways were closed to traffic due to falling rocks and soil (Figure 4) (Ersoy, 2015). Finally, on January 10, 2022, a landslide occurred on the Marmaris İçmeler road due to rain, and falling rocks and soil pieces caused the road to be closed to traffic for 45 minutes. According to the data announced by Meteorology, 60.4 kilograms of rain fell in the district in the last 24 hours (Hürriyet, 2022).

Figure 4. *A view of a landslide in Marmaris (Ersoy, 2015).*

The statistics of fire disasters in Marmaris district covering the years 2018-2021 are shown in **Figure 5.** House fires have the largest share with 16%, followed by open area fires with 15% (AFAD, 2021).

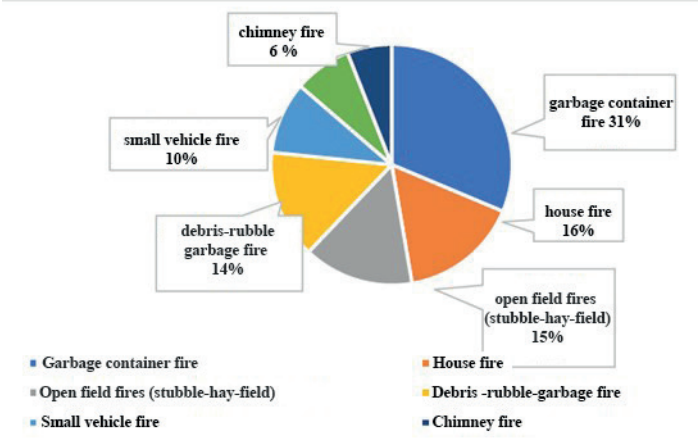

Figure 5. *Distribution of fires occurring in Marmaris District (2018-2021) (AFAD, 2021).*

The forest fire, which began on July 29, 2021, in the Armutalan neighborhood, spread quickly due to wind and was contained after nine days, burning 13,600 hectares in total. A single person perished in the fire, and it destroyed a warehouse, 27 homes, a car, a facility that produced olive oil, and 16 roofs. Neighborhoods were damaged by the flood that resulted from the fire (Sözcü, 2022).

Regarding the flood and flood risk in Marmaris, the locations and dates of floods mentioned in AFAD's IRAP (2021) report are shown in **Table 3** Accordingly, there was no loss of life in the floods experienced, but considering that there is a flood risk in the places where the disaster occurred, they are places that should be taken into consideration for future disasters.

Table 3. *Places subject to flooding in Marmaris district of Muğla province (AFAD, 2021)*

Flood Date	Starting Date	Flood Place	River_Arm	Loss of life	Reference
2003	19.01.2003	Mugla Marmaris	Sümbül River	0	DSİ
2004	22.12.2004	Mugla Marmaris	Berber, Kara, Haci Osman Sinan Rivers	0	DSİ
2006	12.03.2006	Mugla Marmaris	Sinan River	0	DSİ
2015	23.10.2015	Mugla Marmaris	-	0	AFAD
2017	08.03.2017	Mugla Marmaris	-	-	-
2017	09.03.2017	Mugla Marmaris	Degirmen	-	-

DISCUSSION AND CONCLUSION

The results show that the severe risks of climate change and increasing risk rates over time affect all countries, especially developing countries. As a result, climate change has clear impacts on agriculture, water resources, forests, coastal areas, health, ecosystems, cities and infrastructure systems, built environments, and energy. The percentage of anthropogenic impact in these changes stands as an inevitable fact. In order to avoid the impacts mentioned above and the consequences, governments, managers, collaborators, and politicians must work with scientists to develop and implement mitigation strategies.

The study's analysis of the disasters that have struck the Marmaris district revealed that their incidence and severity have increased recently. This recent shift serves as a warning about impending climate change-related tragedies. The study includes a distinct discussion of the steps that should be taken to avert these tragedies.

The Marmaris district was determined to be at extremely high risk of flooding in the A.F.A.D. (2021) disaster risk reduction study, which prioritizes areas at risk of flooding. A.F.A.D. (2021) incorporated the locations in **Table 4** susceptible to flooding into their risk mitigation plan. **Table 4** indicates that

the primary cause of risk in the dangerous neighborhoods is their unsuitable land structure, with previous floods in some neighborhoods or their location as district and provincial centers on alluvium contributing to risk.

Table 4. *Flood risk locations in Marmaris mentioned in AFAD IRAP report (AFAD, 2021)*

CITY	COUNTY	DISTRICT	CASE ANALYZE	FLOOD RISK
Muğla	Marmaris	Bayir District	risky due to its land structure	TO BE
Muğla	Marmaris	Bozburun District	risky due to its land structure	TO BE
Muğla	Marmaris	Camli District	risky since it is within the scope of the rivers listed in Table 1 of the Technical Specifications.	TO BE
Muğla	Marmaris	Cetibeli District	risky due to its land structure	TO BE
Muğla	Marmaris	Hisaronu District	Individual rivers longer than 10 km flowing into a sea or lake	TO BE
Muğla	Marmaris	Içmeler District	risky due to it is in priority class	TO BE
Muğla	Marmaris	Karaca District	risky due to its land structure	TO BE
Muğla	Marmaris	Orhaniye District	risky due to its land structure	TO BE
Muğla	Marmaris	Osmaniye District	risky due to its land structure	TO BE
Muğla	Marmaris	Selimiye District	risky due to its land structure	TO BE
Muğla	Marmaris	Taslica District	risky due to its land structure	TO BE
Muğla	Marmaris	Turgut District	Individual rivers longer than 10 km flowing into a sea or lake	TO BE
Muğla	Marmaris	Turunc District	risky due to its land structure	TO BE
Muğla	Marmaris	Yesilbelde District	risky due to its land structure	TO BE
Muğla	Marmaris	Beldibi District	risky because it is a Provincial and District Center that is historically flooded or on alluvium.	TO BE
Muğla	Marmaris	Central	risky because it is a Provincial and District Center that is historically flooded or on alluvium.	TO BE

According to the A.F.A.D. report (year), the 500-year flood recurrence flow rate in the Marmaris district's flood risk assessment indicates that residential buildings account for 61% of the damage to structures and commercial buildings for 39%. Industrial facilities caused less than 1% of the damage to buildings. These ratios were 53% residential and 47% commercial structures for the 100-year flood recurrence flow rate and 55% residential and 45% commercial structures for the 50-year flood recurrence flow rate.

Consequently, actions about flood risk and climate change should be performed;

- Failure to install protective building materials such as insulation and drainage where the groundwater level is close to the surface, or improper installation where they are in place, increases the risk of flooding. For this reason, these conditions in buildings and infrastructures should be corrected appropriately, considering future flood risk scenarios.

- The issuance of occupancy permits in areas with high flood risk should be reconsidered through regulations as climate change will cause more structural problems in the buildings in these areas.

- Carrying out terracing works on cultivated lands to prevent the loss of plants, nutrients, and elements in the soil against the possibility of surface runoff and flooding on sloping lands in rural areas and informing farmers on this issue will reduce flood risks.

- In the current situation, flood risk can be eliminated by providing an adequate cross-section of structures with insufficient cross-sections that may cause flooding, especially in settlements.

-In addition, legislation on mass movements must be revised and updated in line with climate scenarios.

-It is also necessary to reduce pressures on our water resources through water reuse, rain harvesting, water conservation, and education.

Forest fires are a significant disaster that requires safeguards since they also enhance the likelihood of floods, even though there are many other reasons why they could occur. Forest fires are caused by increased average temperatures brought on by climate change. Actions that, in this case, can be taken to reduce the risk of fire;

-Regarding fire risk, there are problems such as the difficulty of fire trucks reaching historical places such as the Grand Bazaar in Marmaris. In addition, most of the buildings here are built in adjacent order. Increasing urban traffic in the province day by day (Bodrum, Marmaris, Fethiye, Datça vehicle traffic increases due to the population density in the summer months, and the traffic density causes delays in reaching fires, and there is an increase in vehicle fires with vehicle density.) (The number of vehicle fires as of March 2018-2021 is 420).

-Early fire warning systems should be developed in yacht harbors, boatyards, shipyards, factories, hotels, and hostels (the number of ship fires as of March 2018-2021 is 27).

- In meteorological events (extreme winds and hurricanes), regular maintenance of the electrical wires should be carried out at specified intervals,

as sagging in the summer and stretching in the winter causes short circuits and fires under the power lines.

-Unauthorized persons should not inspect chimneys, and experts should regularly clean chimneys to prevent chimney fires and subsequent house fires (As of March 2018-2021, chimney fires are 164).

-According to statistics, garbage container fires were the most common fire in the district, followed by house and open area fires.

- Awareness-raising activities on the benefits of leaving crop residues on the ground and the harms of stubble burning should be increased.

In order to meet targeted safety and performance levels when designing structures and infrastructure systems in the future, existing design codes and standards must be adapted to reflect global climate change. In this respect, existing buildings and infrastructure systems should be evaluated in terms of risks by considering climate change scenarios, necessary measures, and reinforcements should be made. In addition, for the new buildings to be constructed, decision-makers, architects, engineers, urban planners, and all relevant institutions should work together by taking advantage of climate change scenarios and minimizing the damages that may occur by adjusting the existing regulations and plans.

As a result, zoning plans and building reinforcements should be prioritized by considering future climate change scenarios, especially by institutions such as G.D.M (General Directory of Meteorology). While taking these measures; the increasing population should be addressed. It has been scientifically demonstrated that disasters that will occur as a result of climate change will trigger other disasters. It is essential to have a holistic approach instead of focusing on taking measures for a single type of disaster due to increasing air temperatures and forest fires, which in turn leads to an increase in floods. More work is needed to examine the differences between the impacts of recurrent disasters (of the same hazard type), cascading and sequential disasters, and combined disasters with different hazard types.

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CHAPTER 3

ASSESSMENT OF FLOOD RISK DUE TO CLIMATE CHANGE AND DETERMINATION OF MEASURES VIA FUTURE PROJECTIONS[1]

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1 This study is an improved version of the oral presentation presented at the düzenlenen "ASES VI. International Scientific Research Conference" held in Ankara on 22 - 24 December 2023.

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1. INTRODUCTION

The frequency of natural disasters worldwide has increased significantly due to climate change. Although climate change has different effects, it is seen that the most frequent type of disaster globally is floods (Fayazi et al., 2020; Sam et al., 2020). Therefore, frequent flooding in urban areas has become a severe problem (WMO/GWP, 2008). There will be 432 natural disasters recorded in 2021 alone. Of these, 51.6% were floods, higher than the annual disasters average between 2001 and 2020. 101.8 million people were affected by these disasters. They caused 10,492 deaths. They also resulted in economic losses of around 252.1 billion dollars (CRED,2021; Varsha, 2022).

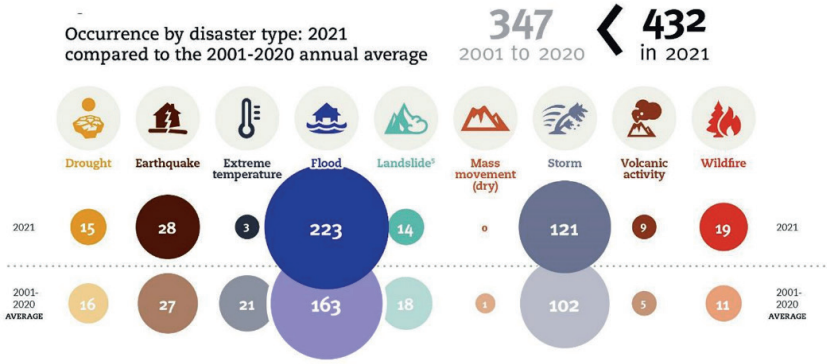

Figure 1: Occurrence values of disasters according to the years 2001-2020 (CRED,2021)

Although climate change is a global phenomenon, its consequences for cities are critical due to the interaction of climate change with urban infrastructure, increasing population, and economic activities. Since the economic growth is in city centers, the population in cities is quite dense and continues to increase uncontrollably daily (Avashia & Garg, 2020). Therefore, the losses and impacts caused by the most minor natural disasters are very high. In this case, if cities are to be more resilient to the impacts of climate change, adaptation needs to be increased (Nelson,2011).

In Turkey, floods rank second among all disasters and first among meteorological disasters regarding loss of life and property. In addition to the harmful effects of floods on human life, they also cause severe economic, environmental, and sociocultural damage. Therefore, all damages that may be caused should be considered when assessing flood risks.

In particular, the effects of climate change, such as impervious surfaces covering most of the urban area and intensification of urban rainfall due to the heat island effect and global warming, contribute to flooding. The impacts

of global climate change are likely to increase hydro-climatic disasters such as flooding in urban areas. In the latest Intergovernmental Panel on Climate Change (IPCC) Special Report on the impact of global warming 1.5 °C above pre-industrial levels, it is seen that greenhouse gas emissions cause climate change by strengthening the greenhouse effect. Thus, it is observed that there is an increase in the frequency and magnitude of floods due to changing precipitation patterns (IPCC, 2018). Despite significant uncertainties about the magnitude of climate change impacts on water-related shocks, the increasing frequency of extreme rainfall continues to pose a severe threat to urban resilience and sustainability in many developing countries (IPCC, 2007; Owusu & Obour, 2021). Adapting to the impacts of flooding is not an option but a necessity that should be adopted at all stages of disasters (before, during, and after).

This study considers Izmir Çiğli and Manisa Akhisar settlements in the Gediz Basin, which have very high flood risk values. The current situation of these settlements is analyzed in line with climate and urban data. Afterward, the settlements are evaluated on hazard and risk maps through flood modeling according to 50, 100, and 500-year future projections. In line with the scenarios created with the current situation and future projections, measures to be taken in architecture, planning, and landscape are proposed for more resilient settlements and highly adaptable to flood risk in the areas.

2. METHODS AND MATERIALS

2.1. Methods

The study consists of five phases. The first phase discussed the relationship between climate change and flood disasters. In the second phase, geographical and climatic data for Izmir Çiğli and Manisa Akhisar settlements determined for the field study were analyzed. In the third phase, the areas' past and current flood risk situations were evaluated. In the fourth phase, flood risk analyses of the areas according to 50, 100, and 500-year future projections are discussed. In the conclusion section, situations that pose a disaster risk are revealed in line with current and future data, and measures that will reduce disaster risk and increase resilience in architecture, planning, and landscaping are determined.

2.2. Settlement Data

Izmir Çiğli and Manisa Akhisar settlements are located in the Aegean Region. They are provinces and districts included in the Gediz Basin. Both settlements are on the Gediz Basin and have been identified as having a very high flood disaster risk (SYGMa, 2019).

Izmir Çiğli is considered risky because streams pass through the district center, and residential areas are very close to the streams. Manisa Akhisar is

also considered risky due to streams in the district center (SYGMb, 2019). Two settlements with very high risk in the Gediz Basin were identified for the field study.

2.2.1. Geographic Data

Izmir Çiğli

Izmir is located in the Aegean Region around the Gulf of Izmir west of the Anatolian Peninsula. It is a harbor city with Balıkesir in the north, Aydın in the south, Manisa in the east, and the Aegean Sea in the west (Yarıcı, 2013). Izmir province has 30 districts, and Çiğli, which was determined for the field study, is one of the essential and valuable districts of Izmir. It is also the district with the highest flood risk in Izmir (Figure 2).

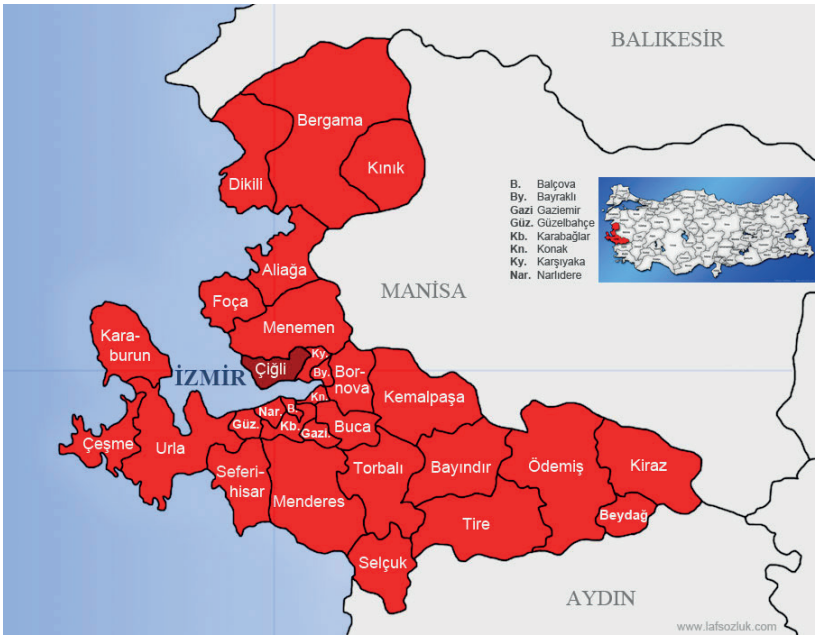

Figure 2: Geographical locations of Izmir and all its districts and Çiğli district (URL.1)

Three river basins are particularly significant in terms of river flooding in Izmir. These basins are the Küçük Menderes Basin, the Gediz Basin, and the North Aegean Basin. Considering the hydrological and hydrogeological status, surface waters and river basins are located in Küçük Menderes (approximately 54.3%), Gediz (16%), and North Aegean Basin (24.96%) (SYGMb, 2019; SYGMc, 2020; SYGMd, 2020).

The total area of Izmir Çiğli, one of the study areas, is 11,378 hectares. The area of the district within the Gediz Basin is 7,598 hectares. In other words, 67% of the settlement is in the Gediz Basin (SYGMb, 2019). The essential water resources in the settlement are the Ilçe içi-1 Stream, Ilçe içi-2 Stream, Ilçe içi-3 Stream, Değirmen Stream, Kurutma Canal, and Tokluağıl Stream. Considering the population values, the population of the Çiğli settlement is 194.525, according to TUIK data. The population in the area within the basin is 130.332 (IRAPa,2021). The population ratio of the district within the basin is 67%.

Manisa Akhisar:

Manisa is a province of Western Anatolia with no coastline but is the closest to the coast. Geographically, it is located in the Aegean Region. It is surrounded by Uşak and Kütahya from the east, Izmir from the west, Balıkesir from the north, Aydın from the south and Denizli from the south-east. There are 17 districts. Akhisar, which was determined for the field study, is one of Manisa's essential and valuable districts, but it is the district with the highest flood risk (Figure 3).

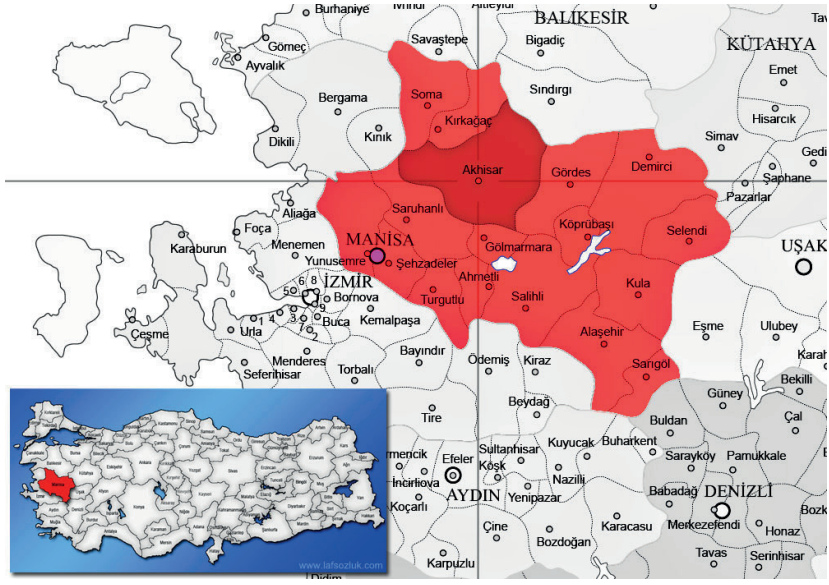

Figure 3: Geographical locations of Manisa and all its districts and Akhisar district (URL.2)

Approximately 86% of Manisa province is located within the borders of the Gediz Basin. The total area of Akhisar district is 169 572 hectares. The area of the district within the basin is 164,870 hectares. In other words, 97% of

the settlement is within the basin (SYGMb,2019). Considering the population values, the population of the Akhisar settlement is 171.381, according to TUIK data. The population in the area within the basin is 166.240 (IRAPb, 2022). The population rate of the district within the basin is 97%. The Kale Stream in Akhisar is an essential water source in the area.

2.2.2. Climate Data

Izmir Çiğli

The province experiences mild and rainy winters and dry and hot summers, which are the characteristics of the typical Mediterranean climate. Only in the high-altitude areas in the east of the province is a transition climate between the Mediterranean and the continental climate. Winters are not very cold due to the sea effect (MGM, 2021).

More than 80% of the precipitation in Izmir occurs in 6 months, starting from the second half of October and ending in the first half of April (Izmir Meteoroloji 2. Bölge Müdürlüğü, 2021). The average annual temperature is 17.9°C. The coldest months are January and February, and the hottest are July and August (Izmir Meteoroloji 2. Bölge Müdürlüğü, 2021; IRAPa, 2021) (Table 1).

Table 1: Meteorological extreme and average values and precipitation values (Izmir Meteoroloji 2. Bölge Müdürlüğü, 2021)

EXTREME SITUATION	VALUES	DATE
Highest Temperature (°C)	43	12.8.2002
Lowest Temperature (°C)	-8,2	4.1.1942
Most Rainfall (kg/m²)	145,3	29.09.2006
Fastest Wind (km/h)	127,1	29.03.1970
Highest Snow Height (cm)	32	31.1.1945
Annual Average Temperature (°C)	17,9	-
Average Annual Humidity %	61,6	-
Average Annual Sunshine Duration (h)	7,9	-
Annual Average Wind Speed (m/s)	3	-
Average Annual Total Precipitation (mm)	696,7	-

When the average precipitation values of Çiğli settlement are examined, the highest precipitation is observed in January and December. The annual long-term average precipitation value is 526.1 mm, 93.9 mm in January, and 87.4 mm in December (Izmir Meteoroloji 2. Bölge Müdürlüğü, 2021).

Manisa Akhisar:

In Manisa, the continental climate characteristics of Central Anatolia are observed together with the Mediterranean climate. While continental Mediterranean climate is observed mainly in the plain and valley sections, continental climate characteristics are observed in the high mountainous and plateau regions (SYGMb, 2019).

According to the observations of the meteorological station located in the basin, total annual precipitation varies between 450-800 mm. The basin is under the influence of the Mediterranean rainfall regime. Summers are dry, and winters are rainy. Most of the precipitation falls in winter. In winter, 44% of the annual precipitation falls, 36% in autumn, 16% in spring, and 3.5% in summer (MGM, 2021).

Considering the precipitation values of Manisa Akhisar district, the average precipitation value for many years is 563.11, and the average precipitation value for 2020 is 362.2. The average temperature is 16.8 °C. The daily maximum temperature measured so far is 45.5 °C in 2007. The daily minimum temperature measured so far is -17.5 °C in 1942 (Manisa Meteoroloji Müdürlüğü, 2021) (Table 2).

Table 2: Manisa province temperature and precipitation (MGM, 2021; IRAPb, 2022)

EXTREME SITUATION	VALUES	DATE
Average Temperature (°C)	16,8	Annual
Average Highest Temperature (°C)	22,8	Annual
Average Lowest Temperature (°C)	11,0	Annual
Average Sunshine Duration (Hours)	75,6	Annual
Average Number Of Rainy Days	86,5	Annual
Average Monthly Total Rainfall (mm)	746,2	Annual
Highest Temperature (°C)	45,5	July
Lowest Temperature (°C)	-17,5	January

2.3. Past and Current Flood Assessments

Izmir Çiğli

200 disaster events occurred in the province, including 131 earthquakes, 23 rock falls, 2 avalanches, 57 landslides, and 93 floods/floods. Considering the Disaster Events Occurring between 2009 and 2020, 63 people lost their lives, and 117 people were injured in 1995 (AFAD, 2021). 6,500 houses were affected by the flood disaster, and approximately 300,000 people were affected. In 2021, 196.4 kg/m3 rainfall was one of the essential flood disasters in which 2 people died (Izmir Çevre Şehircilik ve İklim Değişikliği İl Müdürlüğü, 2021).

In 2019-2020, meteorological solid events in the form of 44.7% flood, 37.2% storm, 9.2% lightning, 7.4% hail, and 11.5% snow were experienced in Izmir Province. Çiğli experienced a total of 14 disasters in 2019-2020. 6 of these are flood disasters (Izmir Meteoroloji 2. Bölge Müdürlüğü, 2021). When we look at the applications made for flood control in the settlement, Çiğli Swamp Drying was constructed in 1956 (IRAPa, 2021; SYGMa, 2019; SYGMb, 2019).

Manisa Akhisar:

Along with earthquakes, the most common disasters in the province are floods, landslides, rock falls, fires, and industrial accidents. In the city, which periodically experiences flood disasters, 86 floods of different levels occurred between 1956 and 2019. 4 of these disasters occurred in the Akhisar district. Among the applications for flood control, Ilgın Stream, Medar Stream, and Dereköy Stream were rehabilitated in Akhisar (IRAPb, 2022; SYGMb, 2019).

2.4. Flood Risk Analysis Assessments in Future Projections

Flood risk assessment analyzes the most adverse possible effects of flooding. The primary purpose of flood risk and damage assessment is to support flood prevention decisions for maintaining environmental features in floodplains, to prevent damage to public and private sector infrastructure, commercial and other economic activities, and the most critical parameter, human safety. The transition from flood hazard to potential risk allows one to decide the riskiest areas and what measures to take. In order to make a flood risk assessment:

- Population affected by flood
- Damage to buildings and property due to flooding
- Affected strategic structures and ınfrastructure facilities
- Data including total flood ımpacts are obtained.

These data are obtained with recurrence periods of 50, 100 and 500 years (Q50, Q100, Q500).

In the Flood Management Plans prepared by the General Directorate of Water Management of the Ministry of Agriculture and Forestry, flood hazard maps and flood risk maps are obtained by flood modeling according to 50, 100, and 500-year recurrence intervals according to three different scenarios. Thus, there are results on which regions are under risk. The plans also include conclusions on flood risk management, prioritization of areas at risk of flooding, activities to be carried out before, during, and after flooding, and measures to be taken for streams within the basin to reduce flood risk (IRAPa, 2021; SYGMb,2019).

Risk scoring is related to assessing the combination of the severity of flooding and the probability of flood hazard (Q50, Q100, and Q500). The decision matrix, one of the risk assessment methods, can be created at this stage. According to a simple risk matrix, high risks that are unacceptable (unmanageable) for event, emergency, or disaster management must be reduced to an acceptable level and manageable (SYGMb,2019) (Table 3).

Table 3: Risk acceptability levels

RISK LEVEL	**DEFINITION**	**MANAGEMENT PROCEDURE**
Very High (R4)	Unacceptable	Necessary precautions should be taken immediately
High (R3)	Important	Should be improved in the short term
Medium (R2)	Potential	Should be improved in the medium term
Low (R1)	Insignificant	It is not a priority. should be improved in the long term
Very Low (R0)	Negligible	No action required

Risk analysis values were obtained separately in the basins. In the Gediz Basin, 15 settlements, 1 of which is high risk, within the borders of Izmir are considered flood risk. In the North Aegean Basin, 14 settlements are accepted as having flood risk. In the North Menderes Basin, 55 settlements, 4 of which are high risk, are considered flood risk. As a result of the modeling studies, it has been determined that the capacities of some of the streams within the project risk areas are insufficient (SYGMd, 2020).

According to the impact severity and recurrence interval of the flood, the sum of the health, environment, cultural heritage, and economic risk scores of the flood areas are evaluated from very high to very low-risk levels. Thus, risk values and levels are determined according to the risk acceptability levels of the settlements (IRAPb, 2019) (Table 4).

Table 4: Risk Values and Levels (SYGMa, 2019)

Settlement	Q50 Total (Health + Environment + Culture + Economy)	Q100 Total (Health + Environment + Culture + Economy)	Q500 Total (Health + Environment + Culture + Economy)	Total (Q50 + Q100 + Q500)	Risk Level
ÇİĞLİ İlçe İçi-2 Stream	71	74	76	221	Very High
AKHİSAR Kale Stream	146	148	152	446	Very High

Izmir Çiğli

It is seen that the flood waters in the Ilçe içi-2 Stream passing through the Çiğli district of Izmir province cause flooding in the settlement by exiting the bed. 2D modeling shows that Q50, Q100, and Q500 floodwaters overflow the bed, affecting many settlements and industrial facilities along the stream route (Figure 4).

Approximately 12.439, 9.312, and 7.970 people are expected to be affected in case of 500, 100, and 50-year recurrence floods in the Ilçe içi-2 Stream passing through Çiğli district center, respectively (Table 5).

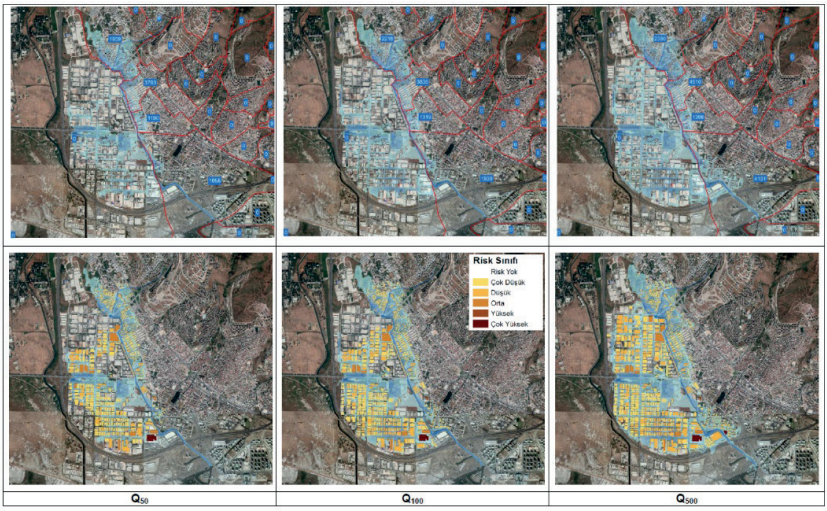

Figure 4: Comparative representation of population affected by floods and flood risk maps (SYGMb, 2019)

The economic damages thought to be experienced in the settlement are seen as the total damages for buildings, roads, and vehicles. The main reason is that it is an area of dense construction and urbanization. For 50 years, the highest amount of damage is 139.139.368 TL for buildings. For 100 years, the highest loss is 200.784.543 TL. For 500 years, the highest loss is 311.902.905 TL in the building area. For 50 and 100 years, the economic loss in the road area is the lowest. For 500 years, it has been seen that the vehicle area has the most minor damage (Table 5) (Figure 5).

Table 5: Flood risk calculation results of Ilçe içi-2 Stream flood risk calculations in Çiğli district of Izmir province (SYGMa, 2019)

FLOOD RECURRENCE PERIOD	ECONOMIC DAMAGE (TL)				AFFECTED POPULATION
	BUILDING	HIGHWAY	VEHICLE	TOTAL	
Q50	139.139.368	50.546.423	58.230.000	247.915.791	7.970
Q100	200.784.543	64.674.970	67.680.000	333.139.513	9.312
Q500	311.902.905	92.215.024	84.870.000	488.987.929	12.439

Due to the damage experienced, the most intensive building area is divided according to building types. The most intensive economic damage in the settlement is experienced in industrial buildings. The rate is 59.8% (Table 6). The rate is so high because Izmir Ataturk organized industrial zone is located within the area. Izmir Atatürk Organised Industrial Zone is an industrial area that significantly contributes to the country's economy on an area of 700 hectares. It is located in the flood risk zone within the Gediz Basin (Figure 5).

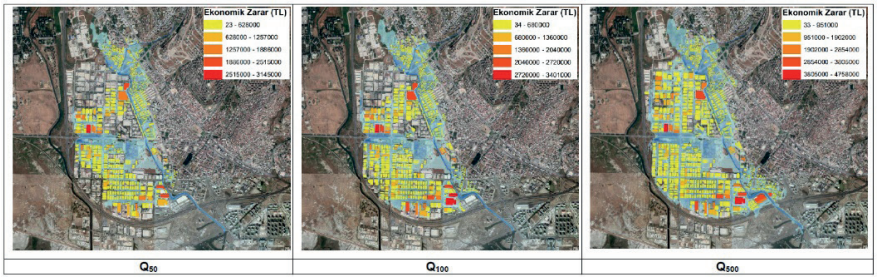

Figure 5: Economic damage maps (SYGMa, 2019).

After industrial buildings, commercial buildings were the most affected, with a rate of 22.2%. Another structure that suffered the highest economic damage was residences, with a rate of 14.4%. Another high rate is in healthcare buildings (SYGMb, 2019) (Table 6). Because Izmir Çiğli Regional Training

Hospital is located in the Gediz Basin, there are also health structures in the flood risk area. Regarding agricultural areas, approximately 13,492 decares of land are used as agricultural land in the settlement (Tarım İl Müdürlüğü, 2010).

Table 6: Amount and rates of economic damage according to building types

FLOOD RECURRENCE PERIOD	BUILDING TYPE	ECONOMIC DAMAGE (TL)	RATE (%)
Q500	Housing	45.029.140	14.4
	Coommercial	69.352.493	22.2
	Industrial	186.537.813	59.8
	Place of worship	594.261	0.2
	Administrative	376.735	0.1
	Health	5.909.557	1.9
	Education	2.536.854	0.9
	Sport	1.409.290	0.5
	Touristy	97.731	0.0
	Other	59.030	0.0

The amount of damage was determined as 186.537.813 TL. After the industrial buildings, the most intensive building types are commercial buildings with a damage of 69.352.493 TL and residential buildings with a damage of 45.029.140 TL (Table 6).

Manisa Akhisar:

According to the hydraulic modeling results of the Kale Stream in Akhisar district, 500, 100, and 50-year recurring floods pose a risk in Akhisar district. The hydraulic modeling results obtained data on the calculated damage values and the number of people affected.

It is seen that the flood waters of Kale Creek, which passes through the Akhisar district of Manisa province, cause flooding by leaving the bed in the settlement. 2D modeling shows that Q50, Q100, and Q500 floodwaters come out of the bed and cause flooding on the right and left banks along the stream route, and flood waters affect the settlements (Figure 6).

Approximately 53.246, 50.503, and 48.650 people are expected to be affected in case of 500, 100, and 50-year recurrence floods in Kale Stream passing through Akhisar district center, respectively (SYGMa, 2019).

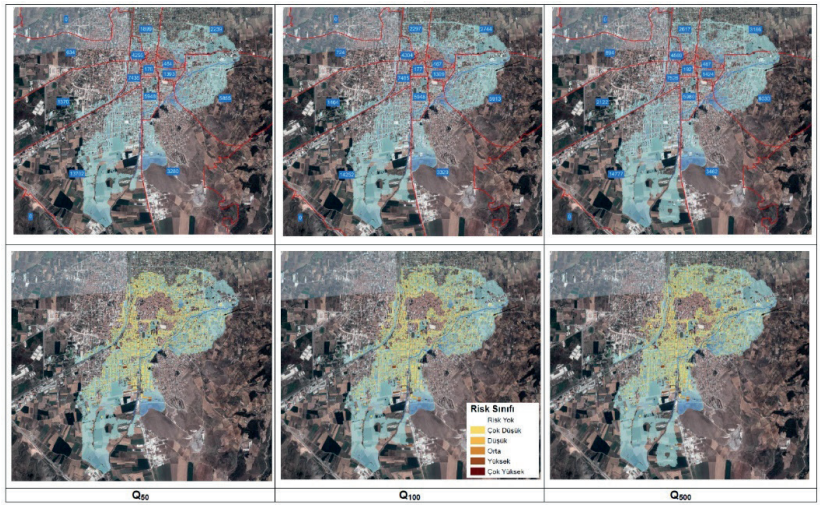

Figure 6: Comparative representation of population affected by floods and flood risk maps (SYGMb, 2019).

The economic damages thought to be experienced in the settlement are seen as the total damages created for buildings, roads, and vehicles. For 50 years, the highest amount of damage is 217 485 000 TL in the vehicle area. For 100 years, the highest loss is 235 620 000 TL in the vehicle area. For 500 years, the highest loss is 273 285 000 TL in the vehicle area. The economic damage in the road area is the lowest amount for 50, 100, and 500 years (Table 7) (Figure 7).

Table 7: Akhisar district Kale Stream flood risk calculation results (IRAPb, 2022)

FLOOD RECURRENCE PERIOD	ECONOMIC DAMAGE (TL)				AFFECTED POPULATION
	BUILDING	HIGHWAY	VEHICLE	TOTAL	
Q50	187.620.882	153.094.965	217.485.000	558.200.847	48.650
Q100	203.599.813	168.155.863	235.620.000	607.375.676	50.503
Q500	236.627.537	185.219.609	273.285.000	695.132.146	53.246

A distinction was made to determine the distribution of economic damage in the building area according to building types. The buildings that suffered the most economic damage in the settlement were residential buildings. The rate of economic damage compared to other building types is 77.6%. Another structure that suffered the most significant economic damage was commercial buildings, which suffered a rate of 12.2%. Another high rate is industrial buildings because the Manisa Akhisar Organized Industrial Zone is within the borders of the Gediz Basin and is located in the flood risk area. (Table 8) (Figure 7).

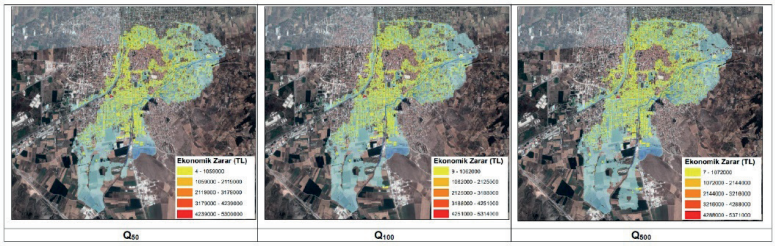

Figure 7: Economic damage maps (SYGMa, 2019).

It is seen that approximately 80.000 decares of land in the settlement are used as agricultural land with a vast agricultural potential. It is an important agricultural center for the region and the country. Industrial zone of Manisa Akhisar is within the borders of Gediz Basin and is in the flood risk area (SYGMb, 2019) (Table 8).

Table 8: Akhisar district Kale Stream total damage distribution

FLOOD RECURRENCE PERIOD	**BUILDING TYPE**	**ECONOMIC DAMAGE (TL)**	**RATE (%)**
Q500	Housing	183.636.980	77.6
	Coommercial	28.953.543	12.2
	Industrial	5.274.881	2.2
	Place of worship	1.606.417	0.7
	Administrative	1.323.668	0.6
	Health	9.565.400	4.0
	Education	3.741.893	1.6
	Sport	1.127.365	0.5
	Cultural	78.413	0.0
	Touristy	849.037	0.4
	Other	469.941	0.2

3. CONCLUSION AND RECOMMENDATIONS

The frequency and intensity of extreme weather events caused by climate change will continue to increase. While the population is increasing rapidly, uncontrolled urbanization is increasing rapidly. On the other hand, natural vegetation is rapidly decreasing. Due to intense concreting, excessive rainfall events cause surface runoff to increase, and cities are flooded. Therefore, cities need robust climate change adaptation strategies to be resilient to disasters.

Current and future disaster analyses and evaluations were made for Izmir Çiğli and Manisa Akhisar, two high flood-risk settlements. Threat and risk situations in settlements have been determined in planning, architecture, and landscape architecture. As a result, precautionary recommendations that will reduce disaster risk and increase resilience and adaptation in line with future projections for the identified threats and risks have been determined.

The study created a framework for determining the measures against floods according to flood risk assessment and future projections. Past, present, and future data were discussed broadly for the measures to be taken. The measures to be taken involve the responsibilities of many different disciplines. Within the scope of this study, the measures to be taken in the fields of architecture, landscape, and planning have been systematically determined. Measures to reduce risks and increase resilience against risks related to these areas have been created in tables (Table 9, Table 10, Table 11).

Table 9: Disaster risk conditions for planning and measures to reduce disaster risk and ıncrease resilience

DISASTER RISK SITUATIONS ENCOUNTERED IN PLANNING
Unplanned, irregular, and unhealthy urbanization
Arrangement and improvement in existing construction is a costly and lengthy process
It is challenging to correct old zoning plans that have been implemented
It is difficult to take action on risky structures
Planning is not made disaster-oriented
The locations of green areas, rural areas, and residential and industrial structures are not determined to be suitable for disasters
Constructions in stream beds or very close locations
Lack of infrastructure
Insufficiency or malfunction of water discharge points
Problems experienced in land expropriations
Shared sewerage and rainwater infrastructure
Practices such as “imar barışı”
MEASURES TO REDUCE DISASTER RISK AND INCREASE RESILIENCE IN PLANNING
Making the new planning plan focused on unity
Executing existing plans in a disaster-oriented manner and making improvements
Planned and on-site urbanization
Improvements can be made to solve future problems and their current situation
Doing things that can be implemented to reduce the risk of floods in settlements
Meeting infrastructure changes and renewing them for the future
Cross-domain collaborative systems via databases
Establishing a GIS-based standard disaster information system to change inter-institutional unity
New construction plans should not be made in stream beds and risky surrounding areas
Planning especially health structures, which are the most important structures during and after a disaster, in areas without flood risk
Keeping buildings with a high number of users (such as hospitals, education, etc.) out of flood risk areas

Table 10: Disaster risk situations encountered in the field of architecture and measures to reduce disaster risk and ıncrease resilience

DISASTER RISK SITUATIONS ENCOUNTERED IN ARCHITECTURE
Uncontrolled construction and concreting
Intervening in existing risky structures requires a long and challenging process
In areas where flood facilities pass through residential and agricultural areas, they cannot be dimensioned adequately due to property owners and physical conditions
Flat areas are preferred due to the ease of cost and implementation of investments made in city development
Building materials that protect the building, such as insulation and drainage, are not used in places where the groundwater level is close to the surface
Low flood elevation in buildings
Places close to river and stream beds become centers of attraction in settlements
Designing early warning systems in flood protection structures
Unplanned and illegal construction
The presence of intensively used buildings in risky areas
MEASURES TO REDUCE DISASTER RISK AND INCREASE RESILIENCE IN ARCHITECTURE
Improvement, transformation, or removal of existing risky structures through incentives and awareness
Construction that prevents heat island formation
Using environmentally compatible materials in new structures and improvements
Creating and developing disaster warning systems in buildings

Table 11: Disaster risk situations encountered in the landscape area and measures to reduce disaster risk and ıncrease resilience

DISASTER RISK SITUATIONS ENCOUNTERED IN LANDSCAPE ARCHITECTURE
Insufficient existing vegetation within the scope of flood prevention works
Trees, etc., are suitable for the region's climatic conditions and soil structure. not choosing plants
Determination of location, direction, height, and materials in a way that will not cause heat island formation in new buildings
Insufficient improvement of stream beds
Narrowing the stream bed sections
Deterioration of the water-permeable structure of the soil
Increasing use of non-natural concrete-based materials in floor covering materials
MEASURES TO REDUCE DISASTER RISK AND INCREASE RESILIENCE IN LANDSCAPE ARCHITECTURE
Renewal with climate-sensitive approaches
Planning and designing landscape infrastructures
Landscape designs that consider underground and aboveground holistically
Protecting and improving vegetation and green areas and increasing afforestation

Developing integrated infrastructure systems and considering blue-green and transportation as a whole
Establishing transportation networks suitable for geographical location and disasters
Planning in constructing, strengthening, and transforming flood protection structures should be carried out with techniques and equipment suitable for today's and future projections
Cleaning of stream beds
Carrying out necessary improvement works by checking the cross-sections of all stream beds and irrigation channels according to the maximum flow rate

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CHAPTER 4

A GENERAL OVERVIEW OF PRO-POOR TOURISM THROUGH THE LOCAL ECONOMIC DEVELOPMENT STRATEGIES OF INTERNATIONAL ORGANIZATIONS

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1. Introduction

The tourism sector, holding a significant share in the global economies, is perceived as a potential tool for development in developing countries. However, situations where the economic benefits of tourism are not distributed fairly and sustainably are frequently observed. In this context, it has been noted that certain segments of traditional tourism approaches are inadequate and may deepen poverty by excluding specific communities. In response to these challenges, Pro-poor tourism (PPT) has emerged with the aim of more equitably sharing the opportunities created by tourism and involving local communities in development.

Local development and tourism are critical issues today regarding economic, social, and environmental sustainability. Especially in developing countries, the effective use of the tourism sector to revitalize local economies and reduce poverty is gaining increasing importance. In this context, the pro-poor tourism approach is a significant strategy supporting sustainable development goals.

The rapid growth of tourism on a global scale, while offering various opportunities to local economies, can also deepen social inequalities and lead to environmental problems. Therefore, the importance of pro-poor tourism is increasing day by day. Our research aims to understand how pro-poor tourism can contribute to local development dynamics by examining the existing literature on sustainable tourism.

The key questions focused on by this study are to understand the distinctive features of pro-poor tourism compared to other tourism models and its position within the dynamics of sustainable local economic development. Accordingly, the research, conducted based on a literature review, aims to identify the unique elements of pro-poor tourism, understand its role in the context of sustainable local economic development, and shed light on its effectiveness.

Pro-poor tourism is an approach aiming for local communities to benefit more from tourism activities and for a fairer distribution of income from these activities. In contrast to traditional tourism models, pro-poor tourism encourages the participation and interaction of the local population. This article aims to thoroughly examine the role and effects of pro-poor tourism within the context of sustainable local development dynamics.

During the research process, a detailed literature review was conducted on the concept of pro-poor tourism within the framework of the question "What are the characteristics that differentiate pro-poor tourism from other tourism approaches?" The data, evaluations, and comments obtained from this review are presented in tables to provide information on relevant topics.

Additionally, an examination of pro-poor tourism within the context of local economic development strategies of international organizations was conducted to answer the question "What is the position of pro-poor tourism within the dynamics of sustainable local economic development?" In this context, comparisons were made through the strategies of international organizations such as the UN, the European Union, the World Bank, the ILO, and the OECD. The data obtained from these comparisons are presented with tables containing situation assessments, revealing the position of pro-poor tourism within the dynamics of local economic development.

The significance of this study arises from the combination of pro-poor tourism and local economic development strategies. It is a well-known fact that traditional tourism models often do not provide sufficient benefits to local communities and, in some cases, may even deepen poverty. In this context, the prominent features of pro-poor tourism, its position within the dynamics of local economic development, and the sustainability perspective constitute the focal points of the study. This analysis will contribute to a deeper understanding of the role of pro-poor tourism within local economic development strategies, aiming to more equitably share the potential of tourism and effectively involve communities in development. In this context, the findings of the study will provide important information that can guide both the academic literature and practitioners in the tourism sector in creating effective tourism strategies to achieve sustainable development goals.

2. Methodology & Materials

2.1. Methodology

The study, which is based on a literature review, aims to address research questions. To find answers to the question "R.Q.1. What are the characteristics that differentiate pro-poor tourism from other tourism models, especially community-based tourism?" a literature review was conducted on the concept of pro-poor tourism, and the data obtained from this review were presented in tables along with evaluations and comments.

To answer the question "R.Q.2. What is the position of pro-poor tourism within the dynamics of sustainable local economic development?" an examination of pro-poor tourism within the context of the local economic development strategies of international organizations such as the United Nations, World Bank, European Union, ILO, and OECD was conducted. The results of these comparisons were presented in tables containing situation assessments, revealing the position of pro-poor tourism within the dynamics of local economic development.

2.2. Materials

2.2.1. The concepts of pro-poor tourism and community-based tourism.

Tourism has long been recognized as a powerful tool for economic development and poverty reduction; however, it is observed that traditional tourism models, especially, fail to provide sufficient benefits to local communities living in poverty. In response to this shortcoming, pro-poor tourism has emerged, aiming to redistribute the benefits of tourism, particularly to marginalized or impoverished local populations. Pro-poor tourism appears as a form of tourism that includes local communities in the tourism value chain, aiming to empower them by ensuring they benefit from the economic advantages generated by tourism activities. The primary goal of pro-poor tourism, which involves local communities in the tourism industry, is to create sustainable and inclusive development that improves living standards, preserves cultural heritage, and protects the environment (Snyman, 2016).

The concept of pro-poor tourism, focusing on using tourism as a tool to combat poverty, emerged in the late 1990s. The idea that poverty could be reduced through tourism first came to the forefront in the 1970s; however, a more focused approach towards pro-poor tourism began to take shape in the 1990s.

Towards the end of the 1990s, the concept of pro-poor tourism gained importance, emphasizing tourism initiatives that provide clear benefits to the poor. This signaled a shift toward a more inclusive and poverty-focused approach to tourism development.

The historical development of pro-poor tourism can be summarized as follows:

Table 1. *Historical development of pro-poor tourism (Compiled by Saayman and Giampiccoli, 2016)*

Developmental features	Description
Origin	It is based on the collaboration between the UK's Department for International Development (DFID) and the Department for Environment, Transport and the Regions (DETR). The foundation of Pro-Poor Tourism (PPT) is outlined in their report on Sustainable Tourism and Poverty Alleviation.
Neoliberal context	Within the neoliberal framework, the reduction of poverty and community development is reflected from the perspective of the private sector. The focus is on maximizing the private sector's contribution to poverty reduction through responsible business practices.
Development shift	PPT signifies a shift in prioritizing poverty reduction as a central agenda. This change has manifested in the development industry's alteration in promoting poverty alleviation and sustainable development.
Adoption by key organizations	Organizations with a focus on PPT, such as the UN World Tourism Organization (UNWTO), the Overseas Development Institute (ODI) in the UK, the SNV Netherlands Development Organization (SNV), and the Asian Development Bank, have embraced these principles.
Influence of top national organizations	High-level national organizations have begun to address the increasing poverty and inequality effectively by developing strategies related to PPT.

Defined as a type of tourism that directly benefits the poor, pro-poor tourism aims to address socio-economic inequalities associated with traditional tourism models by creating opportunities for income generation, employment, and community development. The key concepts associated with pro-poor tourism include a focus on community participation, capacity building, sustainable development, and the equitable distribution of benefits among the local population.

With changing perspectives on tourism, pro-poor tourism has faced criticism for theoretical ambiguities, methodological limitations, and an excessive emphasis on community-based approaches. Today, the concept of pro-poor tourism is being extensively explored in terms of effective implementation and measuring its impact on poverty reduction. Alternative approaches and strategies are being explored to enhance the effectiveness of pro-poor tourism initiatives in promoting sustainable and inclusive development.

In general, the emergence of pro-poor tourism reflects an increasing recognition of the potential of tourism as a tool for poverty reduction and

sustainable development. It underscores the importance of inclusive and community-centered approaches in the tourism industry.

A review of the literature reveals that pro-poor tourism (PPT) is defined in various ways that reflect its multifaceted nature and objectives. How the concept is addressed in the literature (Harrison, 2008) is presented in the table below:

Table 2. *Ways of addressing pro-poor tourism in the literature*

Description	**Features**
Tourism benefiting the poor	- Generating income for poor and marginalized communities - Creating employment and socio-economic development opportunities
Inclusive tourism development	- Reducing poverty - Increasing local livelihoods - Promoting social justice within tourism destinations
Community-centered approach	- Involvement of local communities in decision-making processes - Resource management - Distribution of tourism benefits
Sustainable and Responsible Tourism	- Minimizing negative environmental impacts - Preserving cultural heritage - Promoting ethical tourism practices
Integration of the poor into the market	- Tourism value chains - Markets - Networks
Poverty reduction	- Targeted interventions - Capacity building - Development of an inclusive business model

Pro-poor tourism is generally defined as generating income, employment, and socio-economic development opportunities directly for poor and marginalized communities. It also operates with inclusive tourism development strategies that aim to reduce poverty, increase local livelihoods, and promote social justice within tourism destinations. Emphasizing a community-centered approach where local communities actively participate in decision-making processes, resource management, and the distribution of tourism benefits, Pro-poor tourism (PPT) takes on a mission that aligns with sustainable and responsible tourism principles. This mission includes minimizing negative environmental impacts, preserving cultural heritage, and promoting ethical tourism practices.

The core objective of pro-poor tourism is to reduce poverty by integrating the poor into tourism value chains, markets, and networks. This is achieved by implementing targeted interventions, capacity building, and creating an inclusive business model that benefits local communities. By incorporating strategies that integrate the poor into economic opportunities and involve them in the tourism economy, pro-poor tourism aims to reduce poverty through targeted interventions and the creation of inclusive business models that benefit local communities.

Examining various definitions in the literature related to pro-poor tourism reveals a focus on promoting sustainable development, empowering communities, and addressing socio-economic inequalities in tourism destinations. The framework provided by Pro-Poor Tourism sheds light on how its goals are applied to reduce poverty and promote sustainable development efforts in rural areas.

Pro-poor tourism, as a development methodology that aims to use tourism as a tool for poverty reduction, seeks to increase the net income of the poor through tourism initiatives. In the context of pro-poor tourism, net income is defined as the benefits associated with tourism development minus possible economic costs. Pro-poor tourism aims to uplift impoverished communities by increasing the net income of the lowest-income sectors.

The PPT approach, defining poverty based on net income and accepting any tourism model that increases the net income of the poor as valid, aims to include the poor population in the tourism market and fight against poverty. By emphasizing sustainable development practices to ensure the long-term sustainability of tourism as a poverty reduction strategy, PPT focuses on minimizing negative environmental impacts and promoting community well-being. It advocates for inclusive decision-making processes that involve local communities in the planning and implementation of tourism initiatives.

This approach aims to ensure the fair distribution of tourism benefits among community members, promote capacity-building programs for local communities, increase skills and knowledge levels in tourism-related activities, and actively involve communities in benefiting from tourism initiatives (Gascón, 2015).

Pro-poor tourism is seen to adhere to principles that emphasize the importance of community participation, sustainable development, and the fair distribution of benefits (Kıngır and Kiper, 2023):

- Participation: Active participation of the poor in planning and decision-making processes is crucial.

- Holistic perspective: Addressing the various needs and challenges faced by marginalized communities requires considering economic, social, and environmental livelihood concerns in both the short and long term.

- Balanced approach: Meaningful and sustainable benefits for local communities should be pursued through the implementation of various strategies at both micro and macro levels.

- Well-established practice: Tourism practices should be developed to suit the specific needs and characteristics of each destination.

- Distribution: Understanding the impact of tourism on the poor by analyzing the distribution of benefits and costs arising from tourism activities is essential. Benefits should be distributed fairly.

Alternative terms used to describe Pro-Poor Tourism, reflecting various dimensions and approaches within the broader concept of tourism aiming to benefit local communities and reduce poverty, include (Scheyvens, 2015):

- Responsible tourism
- Ethical tourism
- Sustainable tourism
- Community-based tourism
- Fair trade tourism
- Just tourism
- Solidarity tourism
- Socially responsible tourism
- Inclusive tourism
- Poverty alleviation tourism

The PPT concept has received extensive support from development agencies, donors, governments, and various tourism organizations since 1999. Despite the adoption of terms like ST-EP (Sustainable Tourism- Eliminating Poverty) by UNWTO and APT (Anti-Poverty Tourism) by Zhao and Ritchie, there has been relatively little critical evaluation of the concept itself by academics. When looking at the literature, it is evident that due to tourism being a significant economic sector in many developing countries, PPT promises to provide more benefits to the poor. It emphasizes the importance of critically evaluating whether governments, the private sector, and other agencies can truly transform how tourism works to deliver tangible benefits to the poor and assess the effectiveness of poverty alleviation and sustainable development efforts (Scheyvens, 2015; Gascón, 2015).

Pro-poor tourism is seen as addressed through community-based tourism practices, relying on prioritizing the needs of the local community. However, there are differences between them in terms of tourism development and community empowerment methods. An overall assessment of these differences is provided in the table below.

Table 3. *Differences between Pro Poor tourism and community participatory tourism (compiled from Saayman and Giampiccoli, 2016).*

Action	**Importance for pro-poor tourism**	**Importance for community-based tourism**
Community ownership and management	External control	Disadvantaged group control
Indigenous outcomes	Insignificant indigenous perspective	Significant indigenous perspective
Management style	Western-oriented	Locally grounded
Holistic approach	Economic	Social, cultural, and economic
Self-reliance	Externally dependent	Internally dependent
Empowerment	Authoritarian	Flexible
Duration and scale	Short-term	Long-term
Redistribution of benefits	Fair distribution	More equitable distribution
Participation and entrepreneurship	Individual empowerment	Collective empowerment

When looking at the above table, it is observed that pro-poor tourism involves external control mechanisms in terms of community ownership and management; in contrast, the community-based tourism model places control in the hands of disadvantaged groups.

Regarding local outcomes, it is evident that pro-poor tourism does not prioritize the local perspective and is introduced from external sources; however, community-based tourism focuses on a local outcome with external support.

Unlike community-based tourism, which adopts a comprehensive approach by focusing on local social, cultural, and economic aspects, pro-poor tourism is seen to concentrate solely on economic issues at the local level.

While community-based tourism encourages communities to be self-sufficient and supports their autonomy, pro-poor tourism, due to its encouragement of dependency on external actors and resources, leads to shortcomings in achieving self-sufficiency.

Community-based tourism guides communities towards taking control of their tourism initiatives and mutual benefit-sharing, while pro-poor tourism sees a more dominant role of external actors in decision-making processes.

Community-based tourism focuses on long-term goals and is applicable at various scales, whereas pro-poor tourism is generally implemented on a larger scale and focuses on long-term goals.

Community-based tourism aims to distribute benefits fairly among community members, whereas pro-poor tourism does not prioritize benefit distribution.

While community-based tourism promotes collective entrepreneurship and active participation, pro-poor tourism tends to focus more on individual benefits.

Pro-poor tourism (PPT) stands out from traditional tourism approaches in its approach to combating poverty (Çolak and Kiper, 2023).

- Focus on reducing poverty: The main goal of pro-poor tourism is to reduce poverty and improve the living standards of local communities in economically disadvantaged areas. In contrast, traditional tourism approaches are primarily centered around economic growth and profit generation.

- Community participation: Pro-poor tourism emphasizes the active involvement of local communities in tourism development and decision-making processes, to ensure that disadvantaged groups benefit from tourism activities. Traditional tourism approaches, on the other hand, often neglect community participation and overlook the needs of the local population.

- Fair distribution of benefits: Pro-poor tourism aims to ensure a fair distribution of benefits from tourism among poor local communities. It encourages activities such as creating local employment opportunities, supporting small businesses, and investing in community development projects. In contrast, traditional tourism approaches often contribute to income inequality as they do not prioritize the fair distribution of benefits.

- Sustainability and long-term impact: Pro-poor tourism promotes responsible tourism behavior by placing a significant emphasis on sustainable tourism practices that minimize negative environmental and social impacts. It strives to provide long-term benefits for local communities. In contrast, traditional tourism approaches often focus on short-term gains and overlook long-term sustainability.

- Impact measurement: Pro-poor tourism aims to measure the effectiveness of interventions in increasing the welfare of local communities, whereas traditional tourism approaches typically lack such a goal.

The differences between traditional tourism and pro-poor tourism are outlined in the table below.

Table 4. *The differences between traditional tourism and pro-poor tourism*

Traditional tourism	**Pro-poor tourism**
Economic growth and profit generation	Focusing on poverty reduction
Neglecting the needs of the local community	Active involvement of local communities in tourism development and decision-making processes
Causing income inequalities	Ensuring fair distribution among disadvantaged groups
Focusing on short-term gains	Emphasizing long-term gains
Lack of concern for poverty alleviation	Monitoring and evaluating the reduction of poverty

Pro-poor tourism plays a crucial role in community development because it has the potential to uplift and empower marginalized communities by offering economic opportunities, while simultaneously enhancing their social and cultural well-being (Bennett et al., 2012). Initiatives in pro-poor tourism aim to create sustainable livelihoods and improve the living conditions of local communities (Snyman, 2016). These efforts focus on ensuring a fair distribution of tourism benefits among community members, especially those who are economically disadvantaged (Simpson, 2007). By encouraging local participation and involvement in tourism activities, pro-poor tourism empowers communities to take ownership of their resources and develop sustainable tourism businesses that reflect their cultural heritage and traditions (Snyman, 2016). Additionally, these initiatives promote the conservation of natural and cultural assets, as local communities inherently have an interest in preserving their resources for future generations.

The primary focus of pro-poor tourism is to ensure that economically disadvantaged communities benefit from the economic advantages of tourism activities. In this context, pro-poor tourism is essentially aimed at addressing social poverty. Based on literature reviews, the activities of pro-poor tourism in reducing poverty are outlined below.

Table 5. *Pro-poor tourism actions to reduce poverty (Compiled by Wang and Wang, 2021)*

Action	Significance
Generating income	Providing employment opportunities for local communities
Enhancing social awareness	Ensuring active participation in local decision-making processes
Improving public services	Revitalizing the necessary infrastructure for tourism development
Preserving local culture	Preserving and promoting local culture and traditions
Protecting the physical environment	Conserving natural resources and ecosystems as a source of income
Providing opportunities for education and personal development	Offering individuals the necessary knowledge and skills to be employed in the tourism sector

The effective implementation of the activities mentioned above in PPT with impactful tourism strategies could lead to the minimization of poverty in disadvantaged areas through tourism and the achievement of sustainable development. Pro-poor tourism considered a significant tool in the development of disadvantaged communities, has been criticized for its limited scope and impact due to its close association with community-based tourism, lack of theoretical distinction, and substantial similarity to other forms of tourism development. There is a need to reintegrate PPT into mainstream studies in tourism and development to expand its focus beyond community-based initiatives, addressing issues such as poverty reduction and development by highlighting the real and potential role of mass tourism in the tourism and development field. This critique emphasizes the necessity of a broader perspective on the impacts of tourism (Harrison, 2018).

Table 6. *Criticisms of pro-poor tourism (compiled from Harrison, 2018)*

Critique	Description
Critiques within the theoretical framework	Lack of theoretical distinctiveness
Methodological critiques	Limited significant differences from other forms of tourism development
Integration critiques	Restriction of its scope and impact by association with community-based tourism
Critiques within the scope of mass tourism	The necessity of integration into mainstream studies in tourism and development

These criticisms emphasize the need for a more comprehensive and integrated approach to pro-poor tourism (PPT) in addressing poverty, extending beyond community-based initiatives. Pro-poor tourism (PPT) has faced numerous criticisms and debates regarding its effectiveness in alleviating poverty, and some of the key criticisms include (Gascon, 2017):

- Dominance of business interests: PPT is sometimes viewed as a tool that primarily serves the business interests of the tourism sector. Expectations regarding the capacity of PPT to alleviate poverty may create unrealistic expectations, and questions have been raised about its effectiveness as a tool for poverty alleviation without addressing the structural constraints and power dynamics within the sector.

- Ignoring structural injustices: Critics argue that PPT may often overlook the underlying structural injustices at the root of poverty. By focusing on increasing benefits for the poor, it is suggested that PPT may fall short of dealing with the systemic issues perpetuating poverty. Merely incorporating the impoverished population into tourism activities may not address the systemic problems sustaining poverty.

- Unequal distribution of benefits: Concerns have been raised about the unequal distribution of benefits among different segments of the impoverished population participating in PPT initiatives. Criticisms highlight that individuals facing resource or opportunity constraints in engaging with tourism activities may not equally benefit from these initiatives.

- Limited evidence of effectiveness: The effectiveness of poverty alleviation strategies within the tourism sector is questioned without concrete evidence demonstrating the impact of PPT on reducing poverty. Doubts persist regarding the long-term sustainability and success of such initiatives without tangible proof of their impact on poverty reduction.

- Overemphasis on economic aspects: PPT is criticized for potentially placing more emphasis on economic outcomes, such as increasing the income of the poor, rather than considering broader social and environmental considerations. This narrow focus may lead to the neglect of other crucial aspects of sustainable development.

These criticisms underscore the complexities and challenges of using tourism as a tool for poverty alleviation. Responding to these criticisms and actively participating in ongoing debates could contribute to improving PPT strategies, enabling them to effectively contribute to sustainable development and poverty reduction.

2.2.2.Evaluation of pro-poor tourism within the scope of international organizations' local economic development strategies.

Local economic development is a process involving strategies aimed at enhancing the economic well-being of a region or community. This development model not only focuses on economic growth but also targets social justice, environmental sustainability, and the participation of local communities. Local economic development strives to be achieved through strategies based on collaboration and inclusivity, effectively utilizing local resources.

Key practices underlying local economic development include:

- Efficient use of local resources: The effective utilization of regional resources is fundamental to local economic development. Evaluating the potential of sectors such as agriculture, industry, and tourism is crucial for diversifying and increasing the resilience of the local economy.

- Support for small and medium-sized enterprises (SMEs): Local economic development strategies often aim to support SMEs. These businesses can increase local employment, market local products, and contribute to community economies.

- Education and skill development: Education and skill development are essential for the sustainable aspect of local economic development. Creating a qualified local workforce can enhance the competitiveness of local businesses and create new opportunities.

- Infrastructure development: A robust infrastructure supports the growth of the local economy. Investments in transportation, energy, water, and other essential infrastructure areas can facilitate the operations of local businesses and attract economic activity to the region.

- Local governance and participation: Effective local governance and community participation are necessary for the success of local economic development. The involvement of community members in decision-making processes ensures that projects align with local needs.

- International organizations' role: International organizations play a crucial role in supporting local economic development strategies. Organizations such as the United Nations Development Programme (UNDP), the World Bank, and the European Union provide financial support, offer policy recommendations, and support local communities by sharing best practices.

Local economic development not only pursues economic growth but also aims to improve the quality of life for communities, working towards a

sustainable future. In this context, effective use of local resources, support for small businesses, education, infrastructure development, and inclusive governance and participation are key elements of a successful local economic development strategy. This approach enables the strengthening of regional economies, enhances the resilience of local communities, and promotes a more inclusive development process.

Various international organizations have examined and supported initiatives related to local economic development. Some of these organizations and their contributions include:

- United Nations (UN): The UN implements projects focused on local economic development and offers policy recommendations to enhance the capacities of local governments, support local economic actors, and promote sustainable development. Additionally, the UN works on strategies that support gender equality and social inclusivity at the local level.

- World Bank: The World Bank supports and finances projects that focus on local economic development strategies. These projects may include strengthening local infrastructure, supporting small and medium-sized enterprises, and implementing education and skill development programs.

- European Union (EU): The EU contributes to local economic development by providing funds for regional and local development projects. Its strategies encompass regional cooperation, infrastructure investments, and innovation promotion.

- Organization for Economic Co-operation and Development (OECD): The OECD encourages the exchange of information among member countries on local economic development strategies. It conducts analyses to identify best practices and provides guidance and recommendations to assess and improve the effectiveness of local economic development policies.

- International Labor Organization (ILO): The ILO's work often focuses on improving local labor markets, occupational health and safety, and promoting decent work at the local level. This contributes to sustainable and fair local economic development.

These organizations engage in activities aimed at supporting local economic development, contributing to sustainable growth at the local level, and empowering communities. These efforts typically involve collaboration with local governments, civil society organizations, and the private sector.

United Nations (UN)

The United Nations implements various programs in the field of local economic development to support member countries in achieving their

sustainable development goals. These programs generally focus on the following areas:

- Poverty reduction: Increasing economic activities at the local level and creating sustainable job opportunities can contribute to reducing poverty.

- Employment and vocational training: Enhancing employment opportunities in local economies and developing people's skills through vocational training programs.

- Infrastructure development: Improvements in transportation, energy, water, and other infrastructure areas that can support the growth of local economies.

- Sustainable agriculture and rural development: Promoting sustainable practices in the agriculture sector and increasing economic activities in rural areas.

- Local entrepreneurship and ınnovation: Supporting local businesses, encouraging entrepreneurship, and highlighting the importance of innovation.

Similarities between the UN's local economic development efforts and pro-poor tourism may include:

- Promotion of local participation: Both approaches encourage the involvement of local communities in tourism activities. The local population needs to have a say in tourism, be involved in decision-making processes, and benefit economically.

- Emphasis on cultural and environmental sustainability: Both approaches prioritize the preservation of local culture and environmental sustainability. Measures should be taken to minimize the environmental impact of tourism activities and ensure the preservation of local culture.

- Fair distribution of income: Both the UN's local economic development efforts and pro-poor tourism aim to achieve a fair distribution of economic benefits within society. The goal is for the local population to receive a fair share of the income.

- Employment opportunities: Both local economic development and pro-poor tourism aim to increase local employment opportunities. Job opportunities in the tourism sector should support the employment of residents.

- Contribution to the local economy: Both approaches emphasize the need for tourism to make a positive contribution to the local economy. Supporting businesses owned by the local population and ensuring that tourism income revitalizes the local economy are crucial.

While the UN's efforts in local economic development have a broad perspective, specialized tourism models like propoor tourism serve as important examples of how these efforts can be applied in the tourism sector. The combination of these two approaches can contribute more effectively to the empowerment of local communities and sustainable development.

World Bank

The World Bank's local economic development strategies aim to promote sustainable economic growth, reduce poverty, and improve living standards in various regions. Some key strategies include (Özgen, 2005):

- Supporting infrastructure development: The World Bank provides financing and technical support for infrastructure projects such as transportation, energy, water supply, and telecommunications. Improving infrastructure can strengthen connections, attract investments, and stimulate economic activity in local communities.

- Encouraging private sector development: The World Bank promotes policies that support entrepreneurship, innovation, and access to finance to facilitate business development. This can lead to job creation, income generation, and overall economic growth at the local level.

- Enhancing human capital: Investing in education, health, and skill training is crucial for creating a qualified workforce and increasing productivity. The World Bank supports programs aimed at improving human capital development, which is essential for sustainable economic development.

- Promoting innovation and technology: Encouraging innovation and technology adoption can increase economic diversity and competitiveness. The World Bank supports initiatives that facilitate technology transfer, research and development, and digital transformation.

- Strengthening governance and institutions: Good governance, transparency, and effective institutions are fundamental for creating a conducive environment for economic development. The World Bank aims to collaborate with governments to improve governance practices, strengthen regulatory frameworks, and combat corruption, vital for sustainable local economic growth.

By implementing these strategies and collaborating with governments, local communities, and other stakeholders, the World Bank aims to support inclusive and sustainable economic development at the local level. There are various opportunities for aligning these strategies with the promotion of Pro-Poor tourism and ensuring that local communities benefit fairly from tourism activities:

- Supporting infrastructure development: Local economic development involves creating the necessary infrastructure to effectively support tourism. Improved infrastructure can facilitate tourist transportation, attract more investments, and increase economic activity in local communities.

- Encouraging private sector development: Pro-poor tourism aims to support local entrepreneurship and increase job opportunities related to tourism. Policies that encourage private sector development can support local businesses in the tourism sector.

- Enhancing human capital: Investing in education, health, and skill development is crucial for providing job opportunities to the local population in the tourism sector. This can enable the local workforce to better respond to the needs of the tourism industry, supporting sustainable economic development.

- Promoting innovation and technology: Innovation and the use of technology in tourism activities can contribute to the diversification and competitiveness of the region. This can be a factor supporting the tourism-focused growth of the local economy.

- Strengthening governance and institutions: Good governance, transparency, and effective institutions are critical for the successful implementation of Pro-Poor tourism. This can ensure that local communities benefit fairly from tourism activities and create a conducive environment for sustainable development.

Therefore, the World Bank's local economic development strategies encompass various elements that can support Pro-Poor tourism. These strategies provide opportunities for local communities to derive greater benefits from the tourism sector.

The European Union (EU)

The European Union (EU) holds a comprehensive perspective acknowledging the importance of empowering local communities and regions to guide sustainable growth and prosperity. Some key points regarding the EU's general view on local development include (Fioretti et al., 2020):

- Multilevel governance: The EU promotes the concept of multilevel governance (MLG), emphasizing collaboration and coordination among different levels of administration (local, regional, national, and European) and civil society actors. This approach recognizes the role of local authorities and stakeholders in decision-making processes and policy implementation.

- Regional cohesion: The EU places significant importance on regional cohesion, aiming to reduce regional disparities and promote balanced

development across regions. This involves supporting integrated approaches to local and regional development, ensuring social inclusion, and enhancing the overall quality of life for all citizens.

- Community-based initiatives: The EU considers community-based initiatives, particularly those related to Community-Led Local Development (CLLD), as effective tools that promote bottom-up and participatory approaches to local development. These initiatives empower local communities to take ownership of development processes and address specific challenges and opportunities.

- Sustainable urban development: The EU places a special focus on sustainable urban development, recognizing cities as key drivers of economic growth, innovation, and social progress. EU policies and initiatives support comprehensive and locally-focused strategies that promote environmental sustainability, social cohesion, and economic resilience in urban areas.

In general, the EU's approach to local development is characterized by a commitment to inclusive governance, regional cohesion, community empowerment, and sustainable urban development. The EU aims to create a resilient and prosperous community that contributes to the overall well-being of European citizens by fostering collaboration and innovation at the local level.

When compared to the general perspective of the European Union, the concept of "pro-poor tourism" may reflect similar principles oriented towards local development. Pro-poor tourism is defined as a strategy aiming to provide more benefits from tourism activities to local communities, especially to impoverished segments. In this context, we can evaluate some key elements common between the EU's general approach and pro-poor tourism:

- Community-focused development: Both the regional development policies of the European Union and pro-poor tourism aim to encourage the participation of local communities in their development processes and the formulation of strategies tailored to local needs.

- Integrated and sustainable development: Similar to the emphasis on territorial cohesion in EU policies, pro-poor tourism also aims to sustainably develop the local economy. Both EU policies and pro-poor tourism adopt an integrated approach concerning environmental sustainability, social inclusiveness, and economic resilience.

- Participation and innovation: The EU's multi-level governance approach supports collaboration between different levels of governance and civil society. Similarly, pro-poor tourism highlights the participation of local communities in decision-making processes related to planning and implementing tourism activities.

- Poverty reduction: Pro-poor tourism is specifically designed to increase the well-being of local populations through tourism activities. It aims to ensure the fair distribution of income, allowing local communities to directly benefit from tourism.

- Cultural richness and diversity: The EU's local development strategies emphasize the preservation of cultural diversity and local values. Pro-poor tourism may also focus on the conservation and promotion of local culture and natural assets.

This assessment indicates that the European Union's overall policy framework and pro-poor tourism serve similar objectives and are based on common principles for local development.

Organization for Economic Cooperation and Development (OECD)

The Organization for Economic Cooperation and Development (OECD) promotes various strategies for local economic development to foster sustainable growth, job creation, and societal well-being. Some key strategies include (OECD, 2023):

- Encouraging entrepreneurship and innovation: Promoting entrepreneurship and supporting innovation are fundamental elements for sustaining local economic development. Supporting innovation ecosystems, and assisting small businesses and startups can create jobs, accelerate economic growth, and enhance competitiveness.

- Developing skills and education: Investing in education and skill development is vital to creating a qualified workforce capable of meeting the demands of a changing economy. Ensuring access to quality education, vocational training, and lifelong learning opportunities can improve employment outcomes and boost local economies.

- Strengthening local infrastructure: The development and maintenance of infrastructure, such as transportation networks, digital connections, and services, are crucial to support economic activities and attract investment to local communities.

- Supporting sustainable development: Encouraging sustainable practices in areas like energy, environment, and urban planning can contribute to building resilient and environmentally friendly local economies. Sustainable development strategies aim to balance economic growth with social inclusivity and environmental protection.

- Fostering regional cooperation and partnerships: Promoting collaboration among local governments, businesses, educational institutions, and

community organizations can encourage more effective and coordinated efforts to support economic development. Creating partnerships and networks can combine resources and expertise to address local challenges and opportunities.

By implementing these strategies and fostering an environment conducive to economic growth and innovation, local governments and communities can progress toward vibrant, inclusive, and sustainable local economies.

There are several key overlaps between the strategies advocated by the OECD for local economic development and the fundamental principles of pro-poor tourism:

Supporting local entrepreneurs, encouraging innovations in the tourism sector, revitalizing the local economy, and increasing overall community well-being are significant goals of pro-poor tourism.

Training and skill development for local involvement in the tourism sector are crucial. This ensures that local communities derive more benefits from tourism activities.

Strengthening local infrastructure can enhance tourism potential and provide more employment and economic opportunities for the local population.

Pro-poor tourism aims to preserve the local environment and cultural richness by promoting sustainable practices, aligning with the OECD's focus on sustainable development.

Pro-poor tourism allows for collaboration and partnerships among local stakeholders in the tourism industry, enabling local communities to derive greater benefits.

These points of overlap indicate shared objectives in supporting local economic development between the OECD's general strategies and the core principles of pro-poor tourism.

International Labor Organization (ILO)

As another international organization implementing strategies for local economic development to promote sustainable development in different regions, the International Labor Organization (ILO) has the following strategies (Rodriguez-Pose, 2001):

- Designing and implementing local development plans through the Local Economic Development Program.

- Improving labor protection measures for informal sector workers, such as regional regulations for informal sector workers, including micro-insurance services.

- Building or reconstructing local economic and institutional development capacities in post-war or post-disaster areas through the Crisis Response and Reconstruction Program.

- Providing support to governments and educational institutions in creating Decent Work through programs like the Universitas Program.

- Localizing development programs by fully understanding local conditions and involving local actors through local forums or similar interactive forms.

- Implementing popular and effective development programs within comprehensive Local Economic Development (LED) strategies, such as microfinance, networking, business support, and capacity building.

- Adapting successfully tested programs in different regional contexts to local economic, social, and institutional conditions with the active participation of local actors.

- Intervening in internal and external challenges to ensure the medium and long-term impact of development programs.

Pro-poor tourism can be assessed within the context of ILO's strategies for local economic development:

- Local economic development programs: This strategy aims to design and implement development programs tailored to the needs of local communities. Integration with pro-poor tourism emphasizes highlighting local tourism potential and transforming it into sustainable economic opportunities.

- Labor protection regulations: Labor protection measures, including micro-insurance services, can support informal workers, particularly in the tourism sector. Pro-poor tourism needs to be integrated with social security measures covering low-income workers.

- Crisis response and reconstruction programs: Strategies for supporting economic and institutional development in post-war or post-disaster areas must include sustainable development strategies for the tourism sector in these regions.

- Decent work ınitiative: Through ILO's focus on creating "Decent Work," pro-poor tourism can emphasize principles such as respect for human rights, fair working conditions, and equality in the tourism sector, contributing to increased benefits for local communities.

- Localization and participation: Understanding local conditions and involving local actors through various forms of participation is crucial for the successful implementation of pro-poor tourism. Supporting the effective

participation of communities in tourism development is essential.

- Microfinance and business support programs: Programs that support pro-poor tourism through microfinance, business support, and capacity building can assist local entrepreneurs in engaging in the tourism sector.

- Adaptability of programs: The adaptability of successful programs tested in different regional contexts with the active participation of local actors is crucial for the sustainable development of pro-poor tourism.

- Medium and long-term impact: Intervening in internal and external challenges ensures the medium and long-term impact of development programs. Evaluating the impact of pro-poor tourism on local economic, social, and institutional conditions is essential.

- Employment opportunities: The tourism sector can provide employment opportunities for local communities. ILO's strategies encourage the training and employment of the local workforce. Pro-poor tourism should particularly focus on increasing employment opportunities for low-income groups.

- Cultural and social harmony: Pro-poor tourism should emphasize strategies that preserve local cultures and social structures. ILO's strategies support cultural diversity and social harmony.

- Sustainable development: Both ILO's strategies and pro-poor tourism emphasize the importance of sustainable development. Pro-poor tourism must incorporate efforts to sustainably use natural resources and maintain ecological balance.

- Local entrepreneurship: The tourism sector should create opportunities for local entrepreneurship. Pro-poor tourism should strengthen local economic development by supporting local businesses and marketing local products.

- Education and capacity development: ILO's strategies prioritize education and skill development. Pro-poor tourism should support education programs aimed at improving the skills of the local population related to tourism.

Commonalities in the local economic development strategies of international organizations may include:

- Education and skill development: Many international organizations emphasize the importance of education and skill development for sustainable local economic development. Creating a qualified local workforce, enhancing the competitiveness of local businesses, and generating new opportunities are key outcomes.

- Infrastructure development: Good infrastructure supports the growth

of the local economy. Investments in areas such as transportation, energy, water, and other essential infrastructure can facilitate the operations of local businesses and attract regional attention.

- Local governance and participation: Effective local governance and community participation are necessary for successful local economic development. Involving community members in decision-making ensures that projects align with local needs.

- Role of international organizations: International organizations play a crucial role in supporting local economic development strategies. Organizations such as the United Nations (UN), the World Bank, and the European Union provide financial support to local development projects, offer policy recommendations, and support community empowerment efforts by sharing best practices.

These commonalities reflect key elements that international organizations generally emphasize and value in their local economic development strategies. Addressing these elements collectively can contribute to inclusive, sustainable, and successful local economic development.

3. Results & Discussion

The concept of pro-poor tourism, which focuses on ensuring that disadvantaged groups in society benefit from tourism revenues, holds significant importance within the scope of local economic development. This study aims to explore the contribution of pro-poor tourism to local economic development through the examination of the concept within the strategies of international organizations involved in local economic development. The strategies presented by the United Nations, the World Bank, the European Union (EU), the Organisation for Economic Co-operation and Development (OECD), and the International Labour Organization (ILO) are evaluated to understand the key objectives and focal points of pro-poor tourism.

Within the framework of two research questions, the study seeks answers:

- *"What are the distinguishing features of pro-poor tourism compared to other tourism approaches?"* based on literature reviews:

- Pro-poor tourism focuses on poverty alleviation.

- It emphasizes community participation, aiming for a fair distribution of economic benefits from tourism among disadvantaged community members.

- Pro-poor tourism places significant importance on sustainable tourism practices that minimize negative environmental and social impacts, promoting responsible tourism behavior and concentrating on long-term effects.

- Its distinctiveness from traditional tourism approaches lies in its goal to measure the effectiveness of interventions in improving the welfare of local communities.

- *"What is the position of pro-poor tourism within the dynamics of sustainable local economic development?"* to answer, the study evaluates pro-poor tourism within the context of international organizations' strategies for local economic development, leading to the following conclusions:

- Pro-poor tourism, within the framework of international organizations' strategies for local economic development, focuses on goals such as poverty reduction, enhancing the well-being of local communities, preserving cultural richness, and developing local economic opportunities.

- There are various overlaps between pro-poor tourism and the strategies of international organizations, including increasing human capital through education and skill development, infrastructure development, supporting sustainable development, and promoting local entrepreneurship.

- The results indicate that pro-poor tourism aligns with the strategies of international organizations, supporting local communities in deriving more benefits from tourism activities.

The study concludes with recommendations for effective implementation of pro-poor tourism in achieving local economic development:

- Ensure robust community participation and interaction in the planning and decision-making processes of tourism initiatives.

- Encourage capacity building and skill development measures for active involvement and benefit of local communities in tourism initiatives.

- Promote collaboration and partnerships among tourism stakeholders, local communities, and government authorities.

- Adopt eco-friendly tourism practices, minimize negative environmental impacts, and encourage the preservation of natural and cultural heritage.

- Implement regular monitoring and evaluation of tourism initiatives, considering factors such as ownership structure, employment levels, infrastructure, governance, and sustainable livelihoods.

The future perspectives for pro-poor tourism's sustainable growth lie in the continuous integration of local communities into tourism planning and decision-making processes, ensuring their representation in tourism management structures and empowering them to actively participate in the development and management of tourism initiatives. Measuring the success of pro-poor tourism projects requires a comprehensive assessment that

considers factors like ownership structure, employment levels, infrastructure, governance, and sustainable livelihoods. Regular monitoring and evaluation, considering these factors, can enable relevant stakeholders to achieve the desired positive effects of pro-poor tourism projects on sustainable local development dynamics.

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CHAPTER 5

REGIONALISM AS AN ARCHITECTURAL DESIGN TOOL: ARCHITECTURAL APPROACH OF TURGUT CANSEVER

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1. INTRODUCTION:

This study is an examination and investigation paper on architectural design focusing on regionalism and sustainable architecture. Through academic researches and architectural projects, it has been found that regionalism has strong relationship with sustainability by the way creating identity in architecture and naturally identity in cities. This design criteria within the scope of identical architectural elements and building designs has very importance in our globalized world. Last ten years globalization effect all the world within the same manner, cities becoming twins with each other in order to getting lost their own cultures, traditions, beliefs and they are more like becoming globalized cities. Of course, we cannot turn our back to globalization which brings new technologies and new construction methodologies&materials that reflect our time, but as academics discourses indicate that, we must get in harmony both of them together. On the one hand there must be our own beliefs, traditions, cultures and collective memories as identical cities and, on the other hand there must be technology, globalization, contemporal styles and recent day reflection. By this way, we can create sustainable environments, which is a mixture of two; identities and global features such as; high-technology.

This article aims to reveal this dual chacrateristics on architectural design and projects, thus, study introduces regionalist architecture as a design tool for both sustainable and globalized environments and cities. Regionalist architecture is not a new concept, it's roots are old but through literature surveys it's found that regionalist architecture has been changed by time.

Regionalism, ciritical regionalism, romantic regionalism, regionalism as a brand issue, are some of basic types of regionalist architecture from the past to present. Alexander Tzonis and Liane Lefaivre's studies on regionalist architecture constitutes the strong part of literature review in the study with famous architects projects such as; Oscar Niemeyer, Alvar Aalto, Renzo Piano, as also sample cases of the study. On the other hand famous Turkish architect Turgut Cansever's projects are selected as the case analyses. Three projects of Turgut Cansever have been selected which all of three are Ağa Han Architectural Design awarded projects. Turgut Cansever, as an awarded architect always aimed to use cultural, identitical, traditional architectural elements in his projects. By this way, he always reflected cultural isses over his buildings, created emotional relation between users and buildings, which we call 'familirization' concept, by this way, he achieved succefully **sustainability in architecture** both physically and socially.

At this point, Turgut Cansever's approach to architectural design, shed a light to create methodology of the paper, by using Turgut Cansever projects, in

the study hypothesis have been created that are used as analysing methodology of the cases.

Thus, the methodology part has been built on unique hypothesis that are created for this study such as; a triology, a triad methodology approach to case analysis. This triad consists of; 'conceptual, contextual, cultural' dimensions which all three dynamics are used together while case analyses. By this way hypothesis; that; romantic regionalist architecture creates familirization, collective memory and identity in building design sometimes by using tectonic architectural elements, sometimes by using cultural features such as Oscar Nieyemer's building in Brazil that is inspired from 'salsa dance', and sometimes by using environmental features such as; North/South, sloped/straight roofs, intorverted /extroverted chracteristic of spaces. Thus, only by a triad it can be succesful to investigate regionalism in architecture, and this triad analyses can demonstrate the strong relation of regionalism with identitified buildings and sustainable environments.

1.1.Aims and Objectives: this paper mainly aims to bring out new ideas to architectural design process, while concept development stage. Thus, architecture with its three dimensions as indicated by Vitrivius ; 'utilitas-firmitas-venustas', it is always expected to be a sucessfull building, all of these three properties must be handled together; 'function-structure-aesthetics'. Thus, its clear that building design exhibit both superior abstract and physical features, both of them together. Through these discourses, study aims to investigate and explore 'regionalism and romantic regionalism' styles as a concept creator tool in the architectural design process. Secondary aim is to indicate regionalism styles' relatioship with context and sustainable issues.

1.2.Problem Statement: study research problem had been developed on architectural design process, concept creation and relation of architecture with regionalism, and sustainability. Thus, research mainly aims to find answers to the questions listed above;

Q1) What is regionalism in architecture and what's it relation with architecture?

Q2) Can we talk about sustainable architectual design? How?

Q3) Turgut Cansever known with his Aga Han Awarded designs, how achieved the relation of regionlism?

1.3.Literature: In the study a comprehensive academic literature survey had been realized especially focusing on the topics; regionalism, romantic regionalism, architectural design, context, concept and design process through diverse regions. The most important parts on theories consists of famous academics such as; Alexander Tzonis, Liane Lefaivre, Kenneth Frampton, Turgut Cansever.

1.4.Methodology: methodology of the study constitutes an important part of the study in order fort he demostration of regionalism and contemporary architectural design relation with sample and cases' analysis. Methodology part conssits of main three body. The 1.st part of the methodology is literature review built on important academics on the topic 'regionalism' such as; Alexander Tzonis, Liane Lefaivre, Kenneth Frampton and Turgut Cansever. The 2.nd part introduces famous architects projects that are known as best samples in the world built on romantic regionalism architectural style and designed through this familiarity concept. These regionalist style projects are from Oscar Nieyemer, Renzo Piano, Moshie Safdie's romantic regionalist approached building designs that are very fascinating.

The 3.rd part of the methodology has been built on famous Aga Han Awarded Turkish Architect Turgut Cansever's projects that were designed with regionalist style. At this part three projects have been introduced for deep analyses which all of them are Aga Han Architectural Design Awarded such as; 1)Turkish History Association Building, Ankara, 2) Demir Holiday Village Bodrum, 3) Ertegün House Bodrum Halikarnas. All of three projetcs have been analyzed in the study with a sub-methodology that is specially developed for the concept of the paper that is concentrates on three stages of romantic regionalism; a) Spatial, 2) Cultural, 3) Contextual as a triology. This triology have been adapted during the Turgut Cansever Projects analyzes and at the end a comprehensive practical data have been obtained.(Table 1&2)

Table 1. Methodology of the paper

<table>
<tr><th>THEORIES-
LITERATURE</th><th>PRACTICES-CASES</th><th>SUB METHODOLOGY</th></tr>
<tr><td>REGIONALISM
TZONIS&LEFAIVRE&
FRAMPTON</td><td>OSCAR NIEMEYER</td><td>SPATIAL DIMENSION
OF ROMANTIC
REGIONALISM
-space analyses both interior and exterior; courtyards, iwans, cumbas, and streets , squares</td></tr>
<tr><td>ROMANTIC
REGIONALISM
TZONIS&LEFAIVRE&
FRAMPTON</td><td>ALVAR AALTO</td><td rowspan="2">CONTEXTUAL DIMENSION
OF ROMANTIC
REGIONALISM
-environmental analyses; climate, topography, South/ north</td></tr>
<tr><td>ARCHITECTURAL
DESIGN</td><td>RENZO PIANO</td></tr>
<tr><td rowspan="3">CONCEPT CREATOR
CONTEXT EFFECT
BRAND RELATION</td><td>TURGUT
CANSEVER</td><td rowspan="4">CONCEPTUAL DIMENSION
OF ROMANTIC
REGIONALISM
-tectonics analyses; architectural elements that are used for familirization</td></tr>
<tr><td>AGA HAN
ARCHITECTURAL
AWARDS</td></tr>
<tr><td>CITY AND
ARCHITECTURE
IN THE ISLAMIC
ARCHITECTURE</td></tr>
<tr><td>TURGUT CANSEVER</td><td>ROOMS AND OTAĞ
TENT</td></tr>
</table>

Table 2. Cases' analyses methodology

SPATIAL DIMENSION	**CONTEXTUAL** DIMENSION	**CONCEPTUAL** DIMENSION
Space as a tectonic element: Arcades, courtyards, cumba (baywindows), iwans,etc.	Climate, topography, orientation of sun as a tectonic element; Sloped roofs, straight roofs, big glass openings, small windows, terraced designs, material usages.	Structure as a tectonic element: Arches, domes, buttresses, arched doors and Windows.

2. LITERATURE REVIEW: CRITICAL REGIONALISM & ROMANTIC REGIONALISM DEFINITIONS, APROACHES

2.1. Discourses of Alexander Tzonis and Lione Lefaivre on Critical Regionalism

As indicated by Tzonis and Lefaivre (1945) in their work; 'Architecture and Identity in a Globalized World', they had interpreted 'regionalism' as a new wave of international style, a post-modernist approach rather than modernist and a different approach that focuses on alternatives. Accordingly, Lucius Burckhardt in 1978, this alternative concept of regionalism has been indicated as; *''The idea was to comment on the efforts of a group of young German architects who in the midst of the 'new wave' of an 'international style' – this time post-modernist rather than modernist – decided to focus on an 'alternative' (Tzonis,1945).*

This alternative concept focus on local needs and potentials, thus it has close relationship with 'sustainability' as adapting long-term environmental quality. Regionalizm as a style exhibits totaly different design character from mass production and industrialization of internatiaonal style. In addition, Mumford's thoughts on the relationship between regionalism and international style very important as; *''that the modern movement in architecture was regionalist at heart, but was high-jacket by the dogmatic international style approach-the solipeistic and chauvinistic expression of 'authenticity' (Tzonis, 1945).*

However when we analyze architectural design of Oscar Niemeyer's Pampulha Dance Hall, the traces of international style such as Le Corbusier's modernist projects, can be seen but the main concept development is based on 'regionalizm'. Accordingly to Tzonis (1945) ; *''The notion of critical regionalism was first introduced almost twenty five years ago. The aim was to draw attention to the approach taken a number of architects in Europe at the time, who were working towards an alternative to postmodernism" (Tzonis, 1945).*

Accoring to Tzonis and Lefaivre (1945), regionalizm as an architectural style had been introduced especially to avoid to live a strong struggle between modern and postmodern styles which was very fashionabel to discuss at that years. In fact as indicated by Tzonis, architects of the term, didn't take into consideration 'regionalism' as neither a personal approach nor a architects' style, but they were intorducing 'regionalism' as a concept creator tool for the building design.(Tzonis&Lefaivre, 1945)

Regionalism indicates an approach to design giving priority to the identity of the particular rather than to universal features. On the other hand, Tzonis emphasizes dual meaning of regionalism with realism, indicates the realistic approach of regionalism also according to Kant' discourses as 'the test of

criticism'. Realism was an appropriate way of reflection and exploration of the identity of the each case, which also still an important prominent today.

Tzonis explores the relationship between these two racing styles; regionalism and international style, within a conceptual way as; *''The reason for this has to do with the ubiquitous conflict in all fields-including architecture-between globalization and international intervention, on the other hand, local identity and the desire for ethnic insularity" (Tzonis,1945)*

In addition, Tzonis introduces regionalism as the context of conflict, a different and bottom-up approach to design, uses the very value of identity both physicaly and socialy also culturaly, that makes it more realistic by removing design from narcissistic formulas from the top down. (Tzonis,1945) The older discourses on regionalist style comes from Vitrivius' De Re Architecture, a Roman text in which Regionalist style had been introduced by both physical and political dimensions. According to Vitrivius; 'natural causes and human rationality were to determine architectural form, thus for him 'regional' architecture, a notion that he was shaped by specific external and internal physical constaints' (Tzonis, 1945).

However, Vitrivius' approach to regionalism from political point of view is really very interesting. According to Vitrivius as indicated by Tzonis & Lefaivre (1945) in their very book 'critical regionalism: identity approach to architecture' , it's emphasized that Vitrivius believed that both region and people living at that region exhibit same characteristics. The conflict of South to North, Germans to Africans, Trabzon to Madrid, Milan to Napoli, etc… the effect of region, it's climate, topography, wind, sun orientation effect architectural designs such as; sloped or straight roofs, introverted or extroverted spaces, using courtyards or iwans, etc.

Vitrivius called this political side of regionalism 'tempereta architecture' wihich he also indicates the existence of 'tenperate people' , North or South human, or architecture as a recipricol concept and explains this as; ''There is an in-between 'temperate' kind of environment that creates temperate architecture and temperate people. This is the environment and architecture that the Romans inhabited and build in. This temperate state is superior to the extreme ones, its architecture and people too" (Tzonis,1945).

Romantic Regionalism: Regions in memory - Romantic regionalism that appeared first within a more picturesque approach to building design in England as new relation between freedom of a group and construction of an identity, and than found it's enrinched architectural meaning in Germany with a new phase termed 'romantic regionalism'. Tzonis emphasizes the different design approach of romantic regionalism as establishing a relation betweem the user and building, which the design and selected regional design features both 2d and spatial, transforms the user to a spectato/observer and the building

into a stage that creates collective memories. (Tzonis,1945).

This is an important concept creator, the usage of historical architectural elements such as, domes, vaults, arcades, etc. makes the sense of emotional familirization, which Gother calls 'faint divining' : an inexplicable temporal awareness of the past. Thus as suggested in the texts, through the path of Romantic Regionalism the spectator is invited to shep acquired conventions when relating to a building. Instead, Goethe suggests that the spectator focuses on certain attributes of the material fabric of the building. The observer is drawn ito an intimate relationship with the building, what is called 'affinity between material fabric and himself'.(Tzonis, 1945) By this way, this affinity establieshes an emotional relation between building and spectator, eliminates the foreign yoke and creates the identity both physical and social.

In the 19th century ROMANTIC regionalist ideas were spread out into folklore studies aimed at delineating regional enclaves by identifying buildings with common architectural attributes; a common treatment of site, common spatial arrangement, common materials and common decorative details. On the other hand, there was also an active implantation of new buildings with 'regional' stylistic chractersitics to serve as markers to affirm the identity and boundaries of a region and the rights of its appropriation by a group. Romantic regionalism were developed and spread out into folklore studies exploring regional attributes over identified buildings which exhit common architectural elements, a common site approach, common spatial organizations, common materials and common decoratvie details. In addition, romantic regionalist style had been applied to new building implemantations to the regions which affirm the identity of the region.

After while, Mumford had declared his concerns about 'roamntic regionalism', not to be misunderstood, and worries about to transform regionalism totaly into vernacularity, primitive and purely local concepts. This worry evoked him through the declaration of new definitions of 'romantic regionalism' as ; '' For this reason he rushes to stress that regionalism is not a matter of using the most available local materials or construction….neither is it in conflict with the 'universal'. At the same time regionalism, as redefined by Mumford, has to help people come to terms with the actual conditions of life and maket hem feel at home. " (Tzonis, quoted from Mumford,1945).

In addition, Mumford had critisized mechanical deformation and machine style of international style of architectural design, and highligtened the originality of regionalism as; ''Regional insight, has to be used to defend us from the 'international style', the absurduties of present technology and the 'despotism' of the mechanical order" (Tzonis, Quoted from Mumford, 1945).

At later discourses of Tzonis, he highlighted the main theme of regionalist style as ; '' **The task of critical regionalism is to rethink architecture through**

the concept of region" (Tzonis, 1945). And indicates the link between design-identity clearly; ''What we call the critical regionalist approach to design and the architecture of identity, recognizes the value of the singular, circumscribes projects within the physical, social, and cultural constraints of the particular, aiming at sustaining diversity while benefiting from universality" (Tzonis, 1945).

On the other hand, in addition to Alexander Tzonis, Lianne Lefaivre filled very important contributions to this romantic regionalism approach, by introducing the concept of 'BRAND AND ROMANTIC REGIONALISM' which she expresses the importance of regionalism during the concept creation process of architectural design. Liane Lefaivre especially highlights the sample of Hilton Hotels, with it's three different regional architectural design styles; 'Cairo- Athens-İstanbul', as three different regions, climate and style under one common brand: HİLTON.

Lefaivre indicates that; '' The contemporary architecture of the Hilton hotels for Cairo, Athens and İstanbul are comparable to that of the embassies.

In 1951 Hilton hotels and the Turkish government annouced their plan to build a new hotel in Istanbul. It was decided to realize a collaboration of famous Turkish Architect Sedat Hakkı Eldem with Gordon Bundshaft of SOM on the architectural design. This was highlighted by Nathaniel Owings as; ''like a meteor in the sky came an Arabian Night's job: the İstanbul Hilton…. The result is a salubrious blend of strong Turkish architecture and American plumbing and heating".

Infact Owings highlighted the strong link between; regionalism with international style, Sedat Hakkı Eldem architecture with contemporary technology. Eldem's design was a picturesque introduction of Turkish architecture as indicated by Liane Lefaivre; ''It harboured vaults designed by Eldem, the canopy at the entrance was dubbed the flying carpet beacuse of the way it's complexly lighted cupolas, curved glass walls and sculptured bars offered visual entertainment worthy of the sensual east according to Wharton. The hotel came equipped with teak Mashrabiyyah-Turkish tiles recalling Ottomon architecture-as well as a tulip room, resened exclusively for women, as in harem"(Lefaivre, 1945).

On the other hand, The Hilton Cairo, was finished in 1953. Lefaivre describes romantic branded regionalist style of hotel as; ''The decoration was consistent with the pharaonic past. The entrance lobby bore a massive reproduction of a stone relief from the Egyptian Museum: a colossal pharaoh hunting the wild life of the Nile. In the guest rooms the brass lamps were inspired by the lotus and the draperies were hand-blocked with a stylized version of the same flower"(Lefaivre, 1945).

Lastly Athens Hilton, was built between 1957-1963. Accordingly to Lefaivre Athens Hilton was like a Greek Amphitheater as she indicates; ‘’It was entered through a series of decending stairs in ancient Greek Amphitheater style, classic lobbies, gallery terraces, gardens, superto swimming pool, health club, garden rooms. Interior courts in the manner of Greek atria, surrounded by fascinating shops”(Lefaivre, 1945).

The topic mentioned here, ‘the regionalism as a brand creator’ by Liane Lefaivre, expecially highlights the identity in architecture and how can regionalism becomes a tool for architectural design by also adding collective memory, and identity to the building and creates distinctive cities agains globalization same city character.

The comparison of Cairo-Athens-İstanbul Hilton hotels with their architectonic elements usage reveals the concept of architectural identity, and demonstrates how regionalism can create identity and brand.

2.2. Turgut Cansever ‘City and Architecture in Islam’

It is not a coincidence that Ottoman residential architecture forms the physical and cultural framework of the family, which forms the basic unit of the social structure, with it’s tectonics order around it’s own axis of existence, independent of the road. Ottoman cities are a very special experience of Islamic culture and human history with the differentiating characteristics of the cities of great cultural ages such as North Africa, Iran and India, and a unity of approaches for the solution of the urban problem. Ottoman cities are a unity of architecture and the world built by nature and man. It is seen that Ottoman cities had an approach that integrated nature, home gardens, pools, fountains, etc. It is not a coincidence that Ottoman residential architecture constitutes the physical and cultural framework of the family, which forms the basic unit of the social structure, with it’s tectonics order around it’s own axis of existence, independent of the road. Domestic architecture in Ottoman cities was also formed on the basis of the same basic approach. The house is formed by bringing together ‘rooms’, which are known to be derived from ‘otağ’, which are independent living units.(Cansever, 2013) (Figure1)

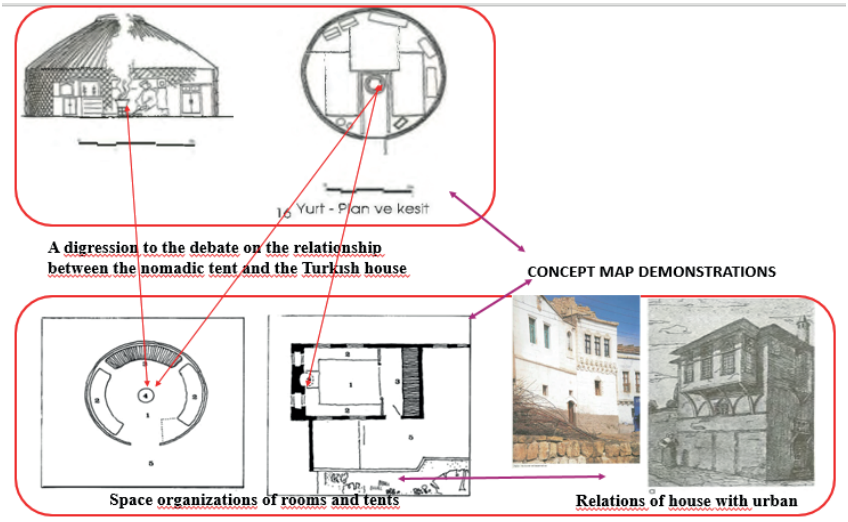


Figure 1. Concept Map Demonstrations of Ottoman city houses with regionalist architectecture

3. SAMPLE ANALYSES FROM ICONIC ARCHITECTS' PROJECTS, INTERNATIONAL CASE ANALYSIS TO DETERMINE ROMANTIC REGIONALISM-CONCEPT CREATOR AND ARCHITECTURAL DESIGN RELATION

3.1. Renzo Piano: From Traditional Hut to Jean-Marie Tijbaou Cultural Centre, Noumea, New Caledonia, 1993-98

At the request of New Caledonia, the French government agreed to finance the construction in Noumea of a centre devoted to the memory of the political leader, Jean-Marie Tijbaou, who was assassinated in 1989. The majör challenge behind this project was the task of paying homeage to a culture while also respecting traditions and history, past, present and future, as well as it's sensitivities. This meant putting European technology and expertise at the service of the traditions and expectations of the Kanak.

The result is that, instead of creating a pastiche replica, Piano has created a new synthesis between local and global, tradition and modernity. An understanding of the development of Kanak culture was a vital part of this project: **becoming familiar** with its history, environment and beliefs would make it possible to remain as faithful as possible to the peoples' traditions. Concretely, that meant using traditional materials, and building methods as well as respecting and drawing on certain natural elements, such as; wind, light, ventilation. The structure and above all, the functionality of **Caledonian huts** were reproduced and adapted, architecturally as well as socially.

The centre is composed of ten houses; each is different in size, measuring between twenty and twenty-eight meters in height. These huts serve various functions or evoke certain themes. Part of the site is devoted to permanent or temporary exhibitions and contains an auditorium and amphitheatre. Second series of huts are, aside from the administrative departments, research areas, a conference room and a library. The last series of huts contains studios for traditional acitivities, such as music, dance, painting and structure. (Figure 2)

Figure 2. The ten 'primitive huts' that make up the Cultural Center are laid out like a village. Piano worked closely with this specialist social anthropologist, Alban Bensa, in deriving this configuration. (source: Lefaivre, L. & Tzonis, A., 1945. Critical Regionalism: Architecture And Identity In A Globalized World. University of Michigan. MIT. Prestel, pages.82-87)

The huts, which are based on local tradition, are anything but traditional in their engineering. They are shaped in such a way as to catch and temper the strong tropical winds that blow through the islands. Their double layered shin-Orinoo wood on the outside and glazed surface on the inside-optimize the circulation of air while minimizing exposure to the hot sun in an energy manner in this tropical climate. (Figure 3)

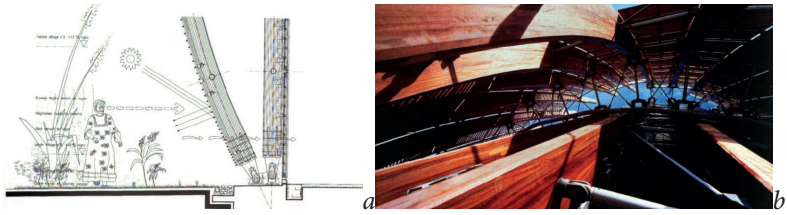


Figure 3. Facade detail of the identified huts

3.2. Oscar Niemeyer: Dance Hall, Pamputha, Belo Horizonte, Minas Gerals, Brazil,1942

Pampulha was an upper-class satellite town on the banks of a picturesquely landscaped artifical lake in 1940, when the perfect of the region, Juscelino Kubitschek, invited the thirty-year-old Oscar Niemeyer to present plans fort he design of the monumental buildings here. Niemeyer had already collaborated with Le Corbusier on the Ministry of Education and Health, built between 1931-43. But in his Pampulha projects he was influenced by Le Corbusier's sweeping embrace of organic contours and the sinuous 'law of the meander' in his book Precisions (1930).

But there is another influence to be found in this building. Niemeyer's architecture at that time was an expression of a much broader regionalist current in Brazilian Congress of Regionalists in 1944. This project, devoted to the samba. It seems itself to be caught up in gently swaying motions of that quintessenatial Brazilian dance and Niemeyer launched the one icon that was to become the most celebrated hallmark of all Brazilian architecture to follow: the sensual rippling curve. **From romantic regionalism to CONCEPT**: The evening sky a breeze wafting up from the lake, and the gently swaying rhythm of a samba. This is what Niemeyer's Dance Hall is made of. (Figure 4&5)

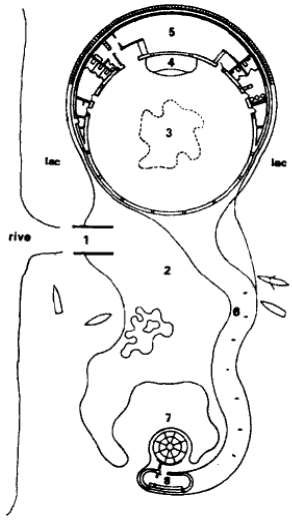


Figure 4. The long and languorously rippling canopy gathere together the following: 1.the entrance passgaways, 2.a sculpture, 3.a restaurant , 4.the orchestra, 5.the kitchen, 6.an eating area for the employees, 7.the dance floor , 8.the clockroom. (source: Lefaivre, L. & Tzonis, A., 1945. Critical Regionalism: Architecture And Identity In A Globalized World. University of Michigan. MIT. Prestel, pages.82-87)

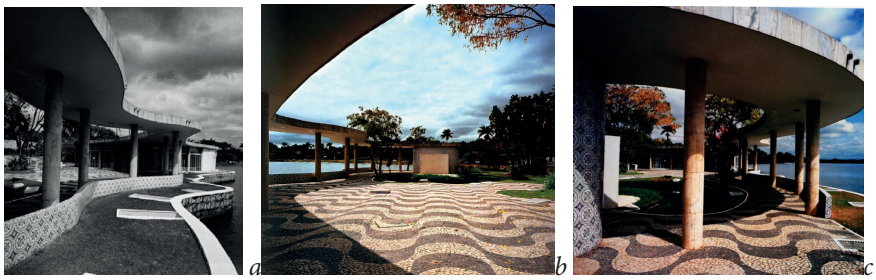


Figure 5. Details and materials of the Dance Hall

4. ARCHITECT TURGUT CANSEVER AND HIS REGIONALIST ARCHITECTURE APPROACH

4.1. Turgut Cansever as an architect and his awarded projects

Turgut Cansever was born in Antalya in 1921. He graduated from the Department of Architecture at the İstanbul Academy of Fine Arts in 1946. He completed his doctorate at the Department of Art History at İstanbul University in 1949. He served as a lecturer at DGSA in 1950-51. He established his own office in 1951 and worked as a consultant in various institutions and organizations. In 1957, he carried out planning studies of İstanbul Municipality. He became an Associate Professor in 1960. And he served as the president of the Marmara Region Planning Organization between years 1959-1960. In 1983, he worked as a consultant for the institution that prepared the Education program at the University of Mecca and in the same year, he was selected as a jury member for the Aga Khan Architecture Award. In addition to being deemed worthy of the Aga Khan Architecture Award three times for the Turkish Historical Society Building in Ankara, the Ertegün House in Bodrum (1980) and the Demir Tourism Complex (1992), he also received degrees in various national and intenational competitions.

4.2. Exploration of Cansever's Architectural Projects from the point of Romantic Regionalism

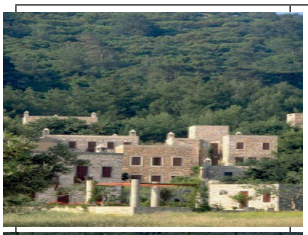
4.2.1.Demir Holiday Village-Bodrum: this project designed by architect Turgut Cansever had been awarded with Aga Han Architectural Design award in 1992, which is the highest honourable degree in architectural competitions. This project is one of the best projects of architect that is designed with in a regionalist architecture approach. Through academic discourses it ehoes that he inspired Bodrum city planning, city morphology; streets, squares, Bodrum houses, during the design of the holiday village. Thus, the **concept of the project is abstraction of Bodrum city plan**. Demir holiday village is located in Madalya Bay, North of the historical city of Bodrum, at the intersection of

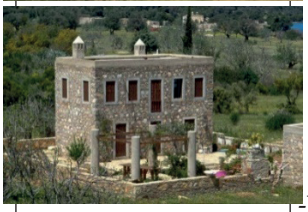
Aegean Sea and the Mediterranean. The 50-hectare land is located in a bay surrounded by a national park area. 35 units consisting of 9 different types of villas have been built. All of the villas were built as holiday homes for middle-class Turkish families. These villas constitute the first phase of a much larger settlement and development scheme. Villa types and land sizes were diversified and used to create different volumes, shapes and masses through construction materials such as; stone, concrete, and wood. Customers are free to choose whatever they want for their homes within the plot, the only condition is that buildings do not block the sea view of the neighboring buildings and that every house has a view of the sea. The plots are standard in size but different in form. The variety of stone wall textures, colors, perfectly shaped gardens and terraces and differentianted but well-controlled villas create a natural residential atmosphere.(Table 3)

Project place: Bodrum, Muğla - Project type: holiday village, single house/ villa-Architect: Turgut Cansever-1987-site area: 27.0000m2(source:https://www.arkiv.com.tr/proje/ertegun-evi/2589)

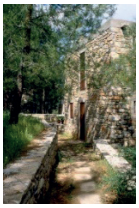
Table.3 'Identity and Architecture' analyses of Demir Holiday Village

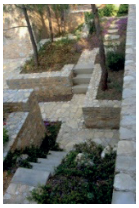
SPATIAL DIMENSION	**CONTEXTUAL** DIMENSION	**CONCEPTUAL** DIMENSION
Space as a tectonic element: Arcades, courtyards, cumba (baywindows), iwans,	Climate,topography,orientation of sun as a tectonic element; Sloped roofs, straight roofs, big glass openings, small windows, terraced designs, material usages	Structure as a tectonic element: Arches, domes, buttresses, arched doors and Windows
DEMİR HOLIDAY VILLAGE		
-courtyards -private gardens -rooms concept	-houses with each their own gardens -all houses exhibit courtyards with stone -street/coridor like narrow linkage roads between houses	-antique style stone coloumns -stylish white chimnies -unique fireplace design (inspired from turkish rooms) -stone masonary building design -straight-terrace roofs -iconic sedir style furniture usage at both interiors and terraces (turkish rooms) -iconic cabinet system unique to turkish rooms



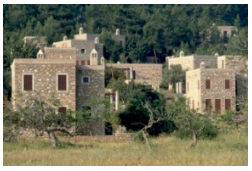


-Courtyards and gardens



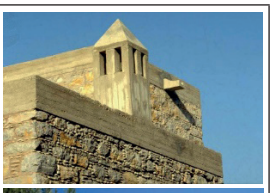


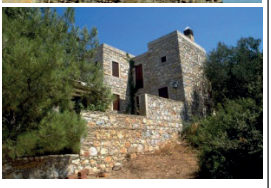
-Narrow colorful roads between houses like Bodrum streets



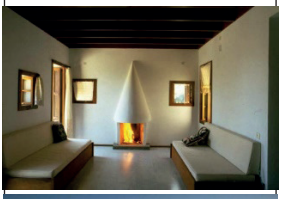
-Sceneary, each house placed carefully not to block other ones views

-Each house its own couryard and road



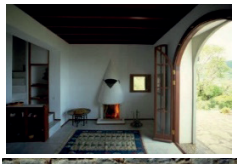


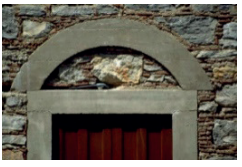
-Stone cons. chimney tradition



-Sedir furniture usage and straight roofs

-Iconic cabinets





-Traditional Arched doors

The tectonic anaylsis of the Demir holiday village with the trialogy ; 'spatial-contextual-conceptual' tectonic analysis demonstrated that the holiday village is like a fairytale by the help of strong and unique conceptual tool developed from romantic regionalist architecture. Romantic regionalist architecture style has been found in the project with different scales, from city, building, room designs, romantic regionalism has been adapted very successfully and became a concept creator of the project. To analyse from city scale, project itself is the concept of the classical Bodrum city with streets and squares, white cubic houses designed within a harmony of climate and topography, and flowers and gardens that add color to white color as a concept.

However Bodrum is white in color, Demir Holiday village, at first design phases architects decided to use concrete stucture resembling Le Corbusier's coloumn-beam system, and cover with white paint to create a strong familirization of Bodrum houses. Then its' canceled due to climate conditions of the region that is not be proper for this type of construction. Therefore, Demir holiday village houses exhibit stone-made construction, but other architectonic features such as; openings, the form and sizes of windows, door types, balcony forms, are all in harmony with familirization concept. The interior spaces are also very succefull by the usage of architectonic elements; sedir used both in interior and exterior spaces, fountains, blusters, decorative colomns, fireclocks, chimneys are all create concept. And lastly open spaces, courtyards with gardens, roof terraces, pathways, and the direction of the houses have been designed within harmony to context. (Figure 6-7-8-9-10)

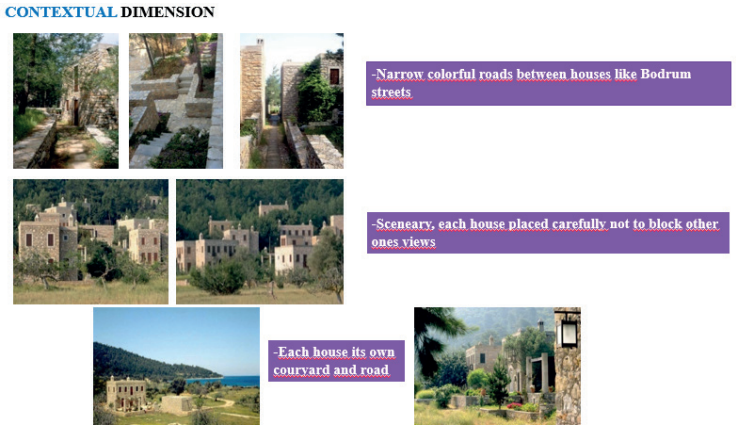


Figure 6. Contextual dimension

Figure 7. Architectonic elements

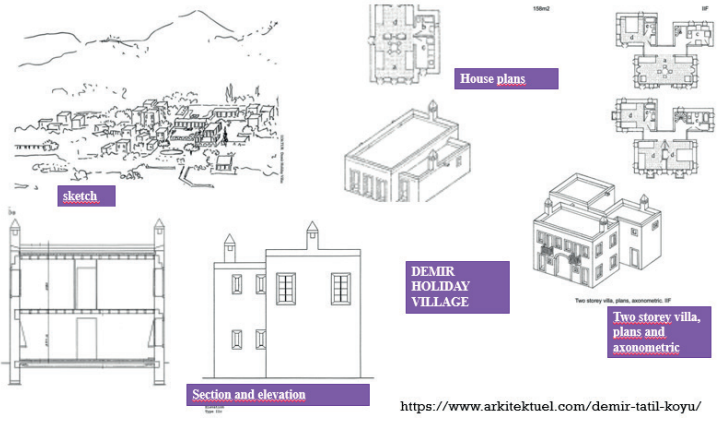


Figure 8.Spatial elements

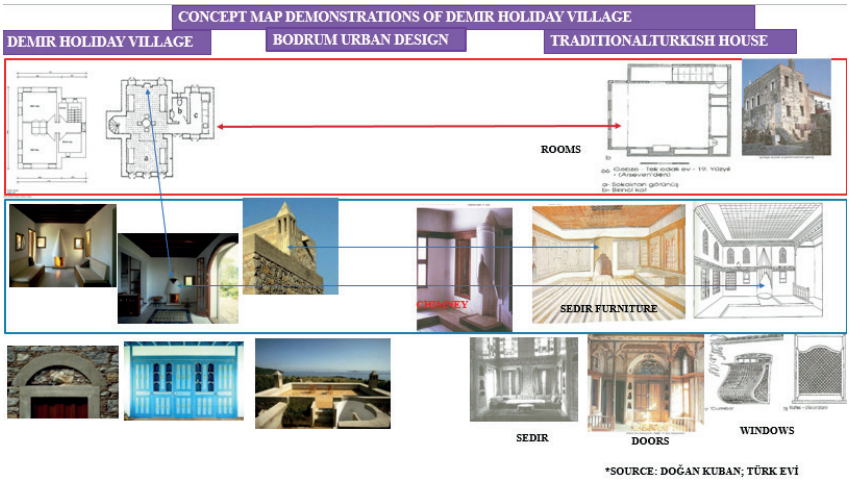


Figure 9. Concept map demonstrations

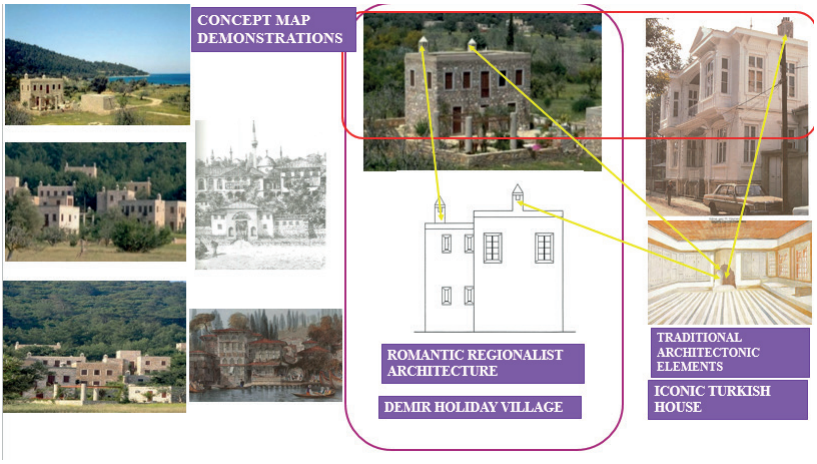


Figure 10. Concept map demonstrations

4.2.2. Ertegun House, Bodrum

Project description from Arkiv: Ertegun housing project designed by Turgut Cansever for Ahmet and Mica Ertegün, preserving the two-winged historical Salih Efendi Mansion, was deemed worthy of the Aga Khan award in 1980.

Bodrum anciently known as Halicarnassus, is a city with a beautiful harbour, an extraordinary castle and traditional Turkish Houses, including the Ertegun House. The Ertegun house, in its original form, consists of two structures joined by a single door. The house was converted into a summer residence in 1973, with an addition completely independent of the old structure. While the old building was built on stone and had narrow windows, the new addition used round concrete columns, wooden dividing walls, doors and adjustable shutters made of oak wood that provide light air to the living area. A free flow was achieved in the interior spaces between the old and the new building.(Table 4)

Project place: Bodrum, Muğla – Project type tipi:Single house/villa-İşveren: Ahmet Ertegün, Mica Ertegün – Project construction:1971-1972. Total site area: 700 m2 (source:https://www.arkiv.com.tr/proje/ertegun-evi/2589)

Table 4. 'Identity and Architecture' analyses of Ertegun House

SPATIAL DIMENSION	**CONTEXTUAL** DIMENSION	**CONCEPTUAL** DIMENSION
Space as a tectonic element: Arcades, courtyards, cumba (baywindows), iwans.	Climate, topography, orientation of sun as a tectonic element; Sloped roofs, straight roofs, big glass openings, small windows, terraced designs, material usages.	Structure as a tectonic element: Arches, domes, buttresses, arched doors and windows.

-Courtyards

-Terraces/baywindows

-Courtyards

-Openstairs with local materials

-Small windows, white cubic buildings unique to Bodrum

-Straight roofs

-Arched doors with serial spaces with an axes: sea-front courtyard-open entrance (iwan)-inner courtyard

-Antigue colounms bordering iwans

-Turkish room inspiration/fireplace

-Terraces with white straight chimney

-Open plan, sitting on the floor traditional Turkish house

-Sedir iconic Turkish furniture

-Inner courtyard

-Site plan, at the back there is a great garden as a courtyard and introverted character
-At the front side there is a secondary courtyard makes a transition between sea and house

-Special shutter system

-Decorative elements

-White paint, small windows, Turkish house, balcony with blusters

Spatial-contextual-conceptual archtectonic analyzes demonstrated that, Ertegun house is one the best samples for romantic regionalist style architecture. The building accommodates regionalist features from floor to ceiling, interior to exterior and ground floor to roof top. By the help of traditional materials (local floor coverings, stair construction, terrace covers), tectonic decorative architectural elements usage (fire clok, chimney, sedir, shutters, arched doors, fountains) and environmental relations (front courtyard, inner courtyard with gardens, open upper terraces like iwans). To sum up: The building itself also reflects a concept of Bodrum's unique white cubic houses with chimneys, small windows (through climate control), front and back gardens. The strongest familirization concept of the building comes from Turkish house architectonic elements reflection on the house exteriors, interiors and materials&constructions. Thus, the user as a viewer can easily get in touch emotionally with the building design, which creates an identified building and sustainability.

4.2.3 Turkish Historical Society Building Ankara

In addition to it's important function that allows researching local history from the first source, the Turkish Historical Society also stands out with it's building design. The building designed by Turgut Cansever and Ertuğ Yener, taking reference from history, is located in Ankara Sıhhiye. The design, which was deemed worthy of the AgaKhan Award in 1980, turns into

a world-renowned structure with this award. Apart from the courtyard inside the central building, a courtyard is defined in the area between the printing house and the central building, which are designed parallel to each other. In this courtyard, where researchers think that the concept of life in traditional architecture has become spatialized, a public space is designed where users can take a break while doing their work. There are two pools and seating aeas in the public area.(Figure 11)

Project name: Turkish History Society Building-Project type: public structure-Place: Sıhhiye Ankara-Architect: Turgut Cansever, Ertuğ Yener-Project construction years: 1951-1967

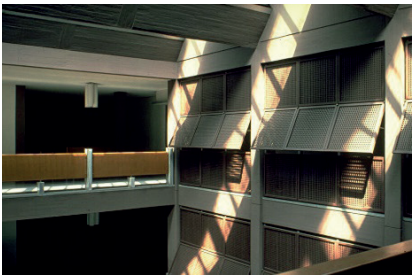


Figure 11. Courtyard and sun light effect inside (source: arkiv)

In 1980, thirteen years after construction of the Turkish Historical Society building was completed, it became a candidate for the Aga Khan Award organized by the Aga Khan Foundation and was among 200 projects. The building, which the jury evaluated under the title **'research of harmony with historical content'**, is described with the following text:

"the award was given for creating a positive stage on the path to a form of architectural expression that combines contemporary building technology with traditional ideas and principles. While the central courtyard reflects the introverted character of traditional Ottoman buildings, the principle of integrity of Islamic architecture was used as an organizing tool to determine the relationship of the parts to the whole".

This building, which is a reaction to the International style, which is a clear common feature of buildings in Ankara since the 1930s, is an example of what can be learned from traditions and a pioneer that points to a more valid architectural language.(Figure 12-13)

Figure 12. Interior design of the building, daylight integration inspired from traditional architectonics (Source: Journal of Architecture-Arkitekt)

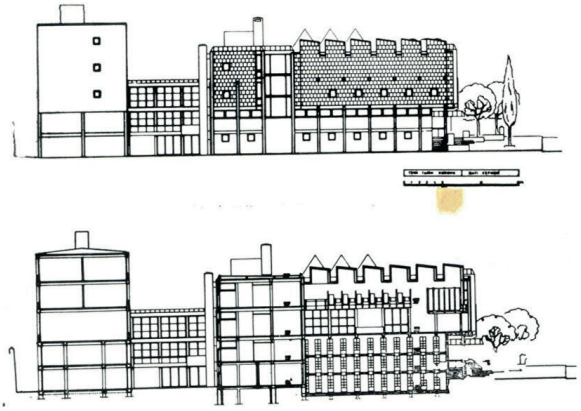


Figure 13. Elevations and sections of the building (Source: Journal of Architecture-Arkitekt)

Part 5. Conclusions

5.1.Main Findings:

This article mainly aimed to investigate and reveal architectonics elements of architecture and it's effect on the design process of architecture. This relationship has been analysed in the research, especially by demonstrating the romantic regionalism as the concept of interpreting architectonics element in contemporary architectural designs by iconic architects projects. The forerunner projects as the interpretation of architectonic and romantic regionalism in architectural design are; Oscan Nieyemer's Dance Hall Brazil, Renzo Piona's culture center, and Turgut Cansever's Demir holiday village, Ertegün House in Bodrum, and Turkish History Society building in Ankara.

These three projects have been selected specially for the research topic, which demonstrates that regionalism has a strong concept creator ability

during architectural design projects.

On the other hand, the topic of the paper 'the interpretation of architectonic elements' became visible at Turgut Cansever's projects strongly.

Cansever's all three project are best samples in the world that realizes the architectonics as a conceptual design tool. The traditional room concept comes from Turkish house. And the interpretation of other architectectonic elements such as; iwans, courtyards, baywindows, shutter systems, arched window and doors, arcaded corridors, small doem designs, as daylight sources, etc. has been found at all three projects of Cansever.

In addition, Oscar Nieyemer's project had show an other way of using romantic regionalism, Nieyemer created the concept of project by using social aspects of regionalism. Nieyemer's interpreting 'salsa' dance as a architectural design concept is really very interesting. He created architectonic concepts from abstract data, thus its different from Cansever and Piano, but very successful.

Lastly Renzo Piano's 'contemporary huts' project demonstrated using 'architectonic details' as a concept creator and interpreted the traditional hut construction into a contemporary cultura center. All of these international succesful projects demonstrated the effect of identity on architecture, and the concept creation ability of architectonic elements.

To sum up, it has been demonstrated in the study that today identidy criteria of cities is becoming more and more valuable day by day against the globalization effect that transforms all cities to same identity. In this regard, cities with identities and collective memories with regionalist style buildings, buildings that are designed within harmony with their environments from both physical and cultural aspects, creates familirization concept. By this way cities with architectural identities will build up sustainable environments and architecture

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CHAPTER 6

URBAN INEQUALITIES: SPATIAL DETECTION MODEL[1]

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INTRODUCTION

Cities should not only be seen as areas where social actions take place, but also as constantly changing structures shaped according to social norms, with their own memory. Cities have a multi-layered structure as a physical reflection of lived experiences. Just as every social event has an urban counterpart, every urban event also has a social reflection. In other words, it is possible to talk about a mutual interaction between the city and society. Urban space should be perceived not only as the relationship of buildings but also as the combination of many behaviours. The shaping of urban space is affected by the behavior of the society living in it. It is known that these behaviours are produced by various social sources. Recently, inequality of social resources has come to the fore in today's cities. Inequality: It can occur in different areas such as culture, ethnic group, class or gender. Inequality can be addressed according to various issues such as social rights, public participation, and behavioural inequality.

The formation of inequality spaces on which the study focuses is related to various concepts such as urban morphology, perception and behavior, user movements, time, culture and gender. Studies that aim to measure the urban environment through social facts can sometimes be inefficient and limited and cannot produce user-based results. However, this study is based on the concepts mentioned. These concepts, which will offer new definitions and applications for the phenomenon of inequality that has come to the fore in recent years, were chosen because they are thought to be effective in the formation of inequality spaces.

Throughout the historical process, cities have existed as a fundamental element and result of every form of production, therefore cities are the first areas where major socio-economic and political relations are geographically concretized.

Cities and urban structures are directly related to the production, reproduction and change of space. However, city modernization efforts are particularly applicable in areas with high profit potential and often tend to serve the demands of certain interest groups, in which case uneven urban development may be inevitable. In fact, uneven development is a reflection of social inequality at the spatial level. As this uneven urban development continues and is maintained as the dominant development pattern, social and spatial inequalities between different parts of the urban area increase. For this reason, it has directly affected people and their behavior, who are the subjects of social and spatial inequalities. In this context, the conceptual framework of the study is based on concepts such as urban morphology, perception, behavior, culture, threshold space and gender to explain the unequal formation of urban space. Because the shaping process of urban experience is not the same for all social subjects, the situation of inequality manifests itself in different layers. Such spaces leave their

users on the social, behavioural and spatial periphery. Additionally, spaces of inequality can negatively impact their users' participation in and perception of the city, while exposing them to an undemocratic experience.

Since spatial organization theories, social and spatial differentiation has been considered as a distinct feature of cities. Urban scientists have accepted that differentiation is a natural process. These differentiations have caused urban residents to directly or indirectly experience spatial segregation and inequality. Negative experiences of users have caused them to create negative images of the city. In this process, urban morphology plays an important role and is also a producer of other potentials. Morphological structure has an impact on the social structure as well as being affected by the social structure. Concepts such as perception, behavior, user movements, culture and threshold space are the results of the morphological structure. Morphological structure creates images by influencing user perception through its formation. Users determine their behavior by remembering these experiences. However, morphological structure and perception are not the only factors in the formation of behaviours. There is a strong relationship between the built environment, culture and behavior. Therefore, culture is an effective factor in the formation of spaces of inequality. Spaces of inequality are expressed as socially, perceptually and spatially undemocratic spaces. Inequality spaces are parallel to the concept of threshold space and affect spatial differentiation-segregation analyses. The concept of gender also adds an integral dimension to urban studies of spatial change and helps examine the origins of inequalities. Research on gender and space shows that inequality is reflected in every field, from urban life to the use of space. Expressing the urban experience of different genders and the inequalities they face plays an important role in the process of understanding and influencing the architecture discipline's society.

Following the focus of the study, a model proposal is presented in which the effects of spatial structuring, user movements and perception, and social structure are evaluated to determine the inequalities at the urban scale spatially.

In this model, the urban area can be analyzed with the proposed methods. Additionally, the impact of spaces with potential for inequality on movement behavior can be examined and evaluated based on the gender factor. By investigating the spatial and structural differences of street networks frequently used by men and women; It is possible to question and observe the inequality potential of factors such as function, purpose of use, spatial experience and perception through users.

Therefore, it is necessary to evaluate the existing urban texture from various perspectives to understand the architectural space and apply this understanding. Real, versatile and individually focused documents play an important role in creating more liveable environments.

This study proposes an experimental application model in the spatial detection of inequalities, identifying and detecting the spatial inequality structure existing in the built environment to read the urban texture. For this, He advocates that four different analysis methods and scales should be used together: (1) texture analysis, (2) behavioural mapping, (3) space syntax and (4) Questionnaire.

Therefore, the subject of the study is about the detection and analysis of the inequality phenomenon experienced at the urban scale at the spatial dimension.

LITERATURE REVIEW

The concept of inequality; It is defined as the unequal distribution of resources in a particular society. Urban inequality is an extremely broad and comprehensive concept. Since the unequal situation or space is usually side by side but separated, it gives a feeling of mutual challenge. The basis of inequality lies in many facts such as language, religion, race, class, gender, ethnicity, age, economy and education. The existence of different social layers and living spaces living in upper, middle and lower class residential areas created knowingly or unknowingly in cities is one of the indicators of inequality. The urban area creates inequalities through a number of unique social phenomena. In Marxist analysis, the phenomenon of class represents the most comprehensive tool of spatial inequality by being associated with labor. In the literature, it is seen that the phenomenon of inequality has been discussed mostly in the field of social sciences and at the sociological level (Baum-Snow et al., 2018; Çelik, 2012; Çiftçi, 2011; Geniş, 2007; Glaeser et al., 2015; Sampson & Wilson, 2013). However, in urban and morphology research, it is thought that inequalities also emerge at the physical and perceptual dimensions . In the light of this information, the lack of research and methods in the literature on the definition, representation and detection of inequality at the urban scale in the spatial dimension also draws attention. Within urban space, streets, intermediate spaces, and spaces provide places where people can live, work, move, socialize, and engage in the countless other urban activities that make up public life. Remembering this, to be truly democratic and egalitarian, attention must be focused on people and places. After all, it is people who produce spaces and places. For this reason, examining people's movements and activities in space is important in understanding space (Beebeejaun, 2017). Space and movement analysis has been conducted in various studies (Çetin et al., 2020; Nasehi et al., 2022; Şahin Körmeçli, 2022; L. Wang et al., 2022). However, the factors underlying the movement in space and causing spatial inequality are little known. Because the studies conducted to date are mostly related to spatial perception and orientation. Superficial solutions have been proposed to the issue of movement in space. This study focuses on the

model for detecting inequalities that occur in various ways at the urban scale, at the spatial dimension.

In this context, in the study;

1. First, to point out the dialectical nature of the relationship between urban space and user and to discuss why it is necessary and stimulating for urban research. Thus, to draw attention to the concept of inequality, which is dominant in space and city studies in recent years,

2. It is aimed to identify areas of inequality in urban areas.

It is possible to talk about the situation of inequality that is felt and experienced almost everywhere in urban-public areas. In urban-public space, inequality occurs in many dimensions. Within the scope of the study, it is assumed that inequalities in the urban environment can occur in different dimensions, physically, socially and perceptually. Physical size in the suggested model; social dimension through morphological and syntactic analysis of the field; texture analysis with video recording and mapping methods, and the perceptual dimension; It will be analyzed with a Questionnaire directed directly to the users of the field in order to measure the perception.

The focus of the study is city users and in this regard, the main hypothesis can be expressed as follows:

✓ Urban spaces are unequal for users, regardless of class, status and cultural patterns.

As a result, to date, the concept of inequality has been discussed at cultural, economic and class levels in the discipline of social sciences. However, it is especially important to look at the issue from the discipline of architecture and approach inequality at the scale of physical space. It is expected that this study and the model to be proposed at the end of the study will provide significant theoretical and practical contributions to the field of architecture in the context of providing a solution to the problem of inequality of urban spaces and shedding light on future studies.

DESCRIPTION OF METHODS

This study includes both quantitative and qualitative methods. In this context, the data collection methods used for the recommendation model are explained in detail below.

Data Collection Methods

During the research process, both quantitative and qualitative data will be collected. The data collection methods to be used in this planned research are listed as follows;

a) Texture Analysis

b) Behavior Mapping

c) Space Syntax

d) Questionnaire

Environmental measurement studies are enriched by the combination of various approaches. While Lynch (1964) 's mapping method encourages detailed documentation of spaces, Ergün & Mertol (2022) emphasized different aspects of spaces by highlighting human perception. Tuan (2007) deepened environmental studies by emphasizing people's social interactions and attachment to place. Carmona and his team contributed to our understanding of the morphological structure of space by defining the structural order of the environment in two and three dimensions (Carmona et al., 2004) . Researchers such as Walzer (1986) have added a new dimension to environmental studies by addressing the social characteristics of space. Castells (1997), Knox and Pinch (2000) examined the impact of built environments on daily life. Hillier and Hanson, (1984), Penn et al. (1998) helped us understand urban life by showing how spatial parameters affect human movements. (Carmona et al., 2004; Castells, 1997; Ergün & Mertol, 2022; Hillier & Hanson, 1984; Knox & Pinch, 2014; Lynch, 1964; Penn et al., 1998; Tuan, 2007; Walzer, 1986).In this context, the methodology of the recommendation model was developed from a humanistic perspective based on human participation. This approach aims to provide rich and deep data by focusing directly on human experience, rather than resorting to methods such as indirect interpretation or historical reconstruction (Table 1).

Table 1 . Examining the methods used by the recommendation model in the context of environment, procedure, output and actors

Environment	Method	Procedure	Output	actors
City, Urban Areas, Neighborhood, Public space, Open Space	**Texture analysis**	Analysis of the physical structure of the urban fabric	Morphological structure, occupancy-vacancy, function and transportation map	Researcher (active-aware)
	Behavior mapping	Users' environmental researcher of behavior Observation by	density map	Researcher (active-aware) Participant (active-unaware)
	Space syntax	Syntactic analysis of the spatial structure of the urban fabric	Visibility and axial maps	Researcher (active-aware)
	Questionnaire	Users' environmental their reactions actively transfers to the participant	Statistical data regarding users' urban space preference data	Researcher (active-aware) Participant (active-aware)

a) Texture analysis

Erkan and Akın (2015) categorized the techniques used in the analysis of urban settlement patterns and the formation of cause-effect relationships in three basic stages;(Erkan & Akın, 2015)

The first group of analyses, analyzes focusing on natural structure and silhouette features, analysis of image and identity elements, and determination of segregated sub-regions,

The second group of analyses, two-dimensional analyses, such as land use, number of building floors, building typologies, building characteristics, road network, island and parcel layout, occupied/empty balance, determination of public, private, semi-public/private areas, as well as cross-sections, Analyzes to define the third dimension such as elevations, facade features, materials and decoration,

The third group of analyzes are various theoretical approaches and mathematical model analysis such as Gestalt analysis, topology, coherence analysis.(Erkan & Akın, 2015)

Analyzing textures provides data about the physical structure of urban space and is especially important (Çetin, 2023). Accordingly, the method defined as 'Texture analysis' includes morphological structure, occupancy-void, function and transportation analyzes of the study area. Morphological structure, transportation, occupancy-vacancy (Karaarslan, 2021; Kürkçüoğlu & Ocakçı, 2015; Zorlu, 2008); It is aimed to reveal in which spatial layers of the city pedestrians are concentrated . Function analysis (Ergün & Mertol, 2022; Ilık, 2022); It consists of determining the functions of the spaces within the boundaries of the study area and creating a function map.

ArcGIS 9.0 software is used to complete the steps of creating new target maps by performing these analyzes within the scope of the model. ArcGIS software allows for very comprehensive spatial and statistical analyses. Occupancy-vacancy and function analyzes are conducted using the direct observation method in the field.

b) Behavior Mapping

Another method used within the scope of the recommendation model is mapping. It is a method used in the field of behavioral sciences to understand individuals' relationships with the environment, their environmental image, and how they perceive and evaluate the environment (S. M. Wang, 2014). One of the mapping methods used in environment-behavior research is behavioral mapping. This method is based on recording the locations and actions of individuals. When creating Behavior Maps, the researcher is also the observer and focuses only on things that can actually be observed. These things; factors such as age, gender, how the individual moves (alone or in a group) (Tok, 2010). In the study, a behavioral mapping method; Location-based behavioral mapping will be used, in which the observer remains stationary at a specific point and observes the participants' movements. As stated; Although it is called "behavior map", this method is generally used to analyze density, not user behavior. With the suggestion method, density determination can be made by observing at previously determined points. The observer will look from his position and examine the movements of pedestrians and determine how and where they are concentrated. These results will be compared with pedestrian count data to create a density map. Behavior with these maps; By comparing the density on the street or avenue with factors such as gender and age, the situations of being at that point are determined as fast/slow walking, waiting, passing, shopping, socializing, engaging in physical activity, etc. will be analyzed through their actions. Because which action causes density is especially important in terms of its potential to create inequality.

Video recording will be made at designated points in the area in order to detect the pedestrian density at certain times throughout the day (Deleu et al., 2021; Kashyap & Kumar Gehlot, 2022). Video recordings will be converted

into digital data with the developed OpenCV software. Users should not notice the video recording as they are asked not to disrupt their natural movement patterns. Recording will be taken for 10 minutes for each hour. It will also be held on different days during the week and at the weekend . With video recording, density will be determined rather than analyzing the pedestrian's behavior and social characteristics in the space.

c) Space Syntax

Space is not a phenomenon that consists only of physical components. For this reason, in research on the morphological state of urban space, social data, that is, users, are also needed beyond the physical components. The 'space syntax' method has been developed to integrate and digitize other data that enable the morphological examination of space with morphological analysis. Space syntax; It is a method to understand the relationship between social structure and space (Şahin Körmeçli, 2022). The analysis method consists of calculating structuring spatial relationships in built environments, it involves measuring the accessibility of all parts of a network considered from each element. The spatial configuration of a city acts as a reflection of the social relationships of its inhabitants (Atak & Çağdaş, 2015). Additionally, configurational descriptions and observational studies of cities have revealed that spatial layout design will influence the intensity of human movement and the activities that occur with it (Nasehi et al., 2022; Şahin Körmeçli, 2022). The importance of spatial structures in affecting pedestrian activities and movement is discussed within the framework of integration and configurational analysis of the method. In this context, axial and visibility analyzes of the area can be made to reveal the relationship between urban space and user. With the syntactic analyzes conducted within the scope of the study, its impact on inequality spaces and its formation potential will be examined.

d) Questionnaire

It is a study supported by subjective evaluation through a Questionnaire on users, with the aim of identifying places of inequality in urban areas on a perceptual dimension. A Questionnaire is being conducted to understand users' evaluations of the field. Questionnaire form; demographic information of participants; their habits of visiting their locality; It is based on questioning the purpose of using the region they are in and the reasons for choosing the region. In order to measure the perceptual evaluations of the participants, different question types with sub-components for each main component are created. Participants are given decision sentences on a 5-point Likert scale (strongly agree-5, agree-4, undecided-3, disagree-2, strongly disagree-1) to score their perceptual reactions .

INSTEAD OF THE RESULT

"Space", which is the fundamental problem of architectural practice and theory, remains an undefined void when considered outside of humans; An architectural object cannot be a "space" without humans. Therefore, the subject of space cannot be considered independently of humans.

The study, which started with this idea, aims to understand the dynamics of "human-environment-behavior" and, like all environment-behavior studies, seeks answers to the questions of how the social structure affects the urban space and how the urban space shapes the social structure. The research suggests that environment-behavior research is sometimes limited due to the use of different methods and different approaches and cannot produce results that describe multifaceted social structuring. Instead of a two-dimensional and sociological reading of urban spaces, this study proposes a new model that defines sequential methods and applications in the context of environment-behavior, where different methods are used together and simultaneously (Figure 1).

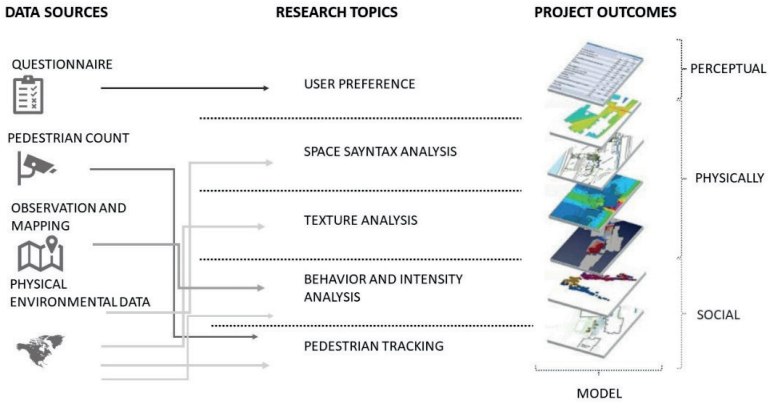

Figure 1 . The model proposed within the scope of the study

This new model is supported by scientific approaches that are used together for the first time and feed each other. These approaches were defined in the study and;

- The components that make up the social structure are different objects.
- In order for the physical environment to function as "space", it must first be noticed by the individual, and what is noticed must be associated with the concept of "time" by gaining meaning.
- The physical environment is affected by the social structure.

• The physical environment affects the user (social structure), and the user (social structure) affects the physical environment.

• In order to comprehend the structural and sociological changes experienced over time, it is necessary to examine the changing, developing and effectively moving physical environment and social structure in its current state.

• There are inequalities in the urban area, viewed through the physical environment and social structure.

• These inequalities of the urban area and their meanings should be explored delicately.

It was chosen based on the expressions.

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CHAPTER 7

USAGE AREAS AND LANDSCAPE VALUE OF APRICOT TREE (PRUNUS ARMENIACA L.)

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1. Introduction

Plants, which form an important part of ecosystems around the world, can grow in different habitats such as forests, meadows, coasts, cliffs, deserts and inland waters. They produce oxygen for the survival of all living things and contribute to the food chain and the balance of nature. They are also used in the pharmaceutical, cosmetics, textile and furniture industries.

Plants that are a source of food for humans usually contain a variety of vitamins, minerals, fiber and other nutrients. Many parts of plants such as leaves, roots, fruits, stems, seeds, flowers, buds and shoots are edible (Kaya Şahin and Güneroğlu, 2021). It is important to pay attention to whether the plant is poisonous or not and the way of consumption (fresh, cooked, processed, etc.).

Another area of use of plants is landscape design. With their aesthetic, functional and ecological features, plants constitute the basic element of urban green space designs. Plants with aesthetic features are constantly changing and developing creatures. With these changes, they add value to the places where they are located. Especially in landscape designs, they attract attention with their flowering and autumn coloration in urban green areas (Güneroğlu et al., 2018).

Edible fruit trees are also used extensively in landscape designs, both for their nutritional and visual value (Güneroğlu and Pektaş, 2022). The use of fruit trees in urban green areas diversifies the landscape and increases its aesthetic value. By creating a natural environment, it brings people together and provides socialization. In addition, the spaces created with the use of these plants help to reduce urban stress and improve the overall quality of life (Pektaş, 2023).

Our country enables the cultivation of many fruit species due to its geographical location, different climatic characteristics and fertile soils (Akça and Aslan, 2017). Different types of fruits such as apple, grape, orange, tangerine, lemon, hazelnut, apricot, peach, pear and pomegranate are grown in our country. Turkey is the world leader in the production and export of cherries, hazelnuts, apricots and figs (Küden and Daşgan, 2021; Çelik, et al., 2023).

For these reasons, in this study, the general characteristics of *Prunus armeniaca* L., which grows in our country, are examined and the possibilities of utilization in landscape design and applications and the necessity of bringing it into use in plant designs are emphasized.

1.1.General Characteristics

Apricot plant is systematically located in the genus Prunus in the Rosales order, Rosaceae family, Prunoidea subfamily (Yang et al., 2019). *Prunus*

armeniaca L. is the cultivated species among apricot species, while *Prunus davidiana, Prunus ansu, Prunus mume, Prunus manhsurica* species are apricot species grown in the wild (Zhebentyayeva, et al., 2012).

Apricot, one of the most produced stone fruits in the world, has a strong and spreading crown and can reach a height of 8-9 meters (Erdoğan Orhan and Kartal, 2011). It is deeply rooted. Branches that are green when young turn brown as they age. Leaves are oval, thin, glossy, slightly wavy, bright green and glabrous. Flowers are pink-white in color, one flower is formed from each flower size. Flowering occurs before leafing. Fruit is round and oval, fruit peel is smooth, hairy, pink or colored and thin on yellow or yellow ground color; flesh is yellow, soft, less juicy than peach and plum. The kernel is flat or almond shaped with a slightly rough cream color (Figure 1).

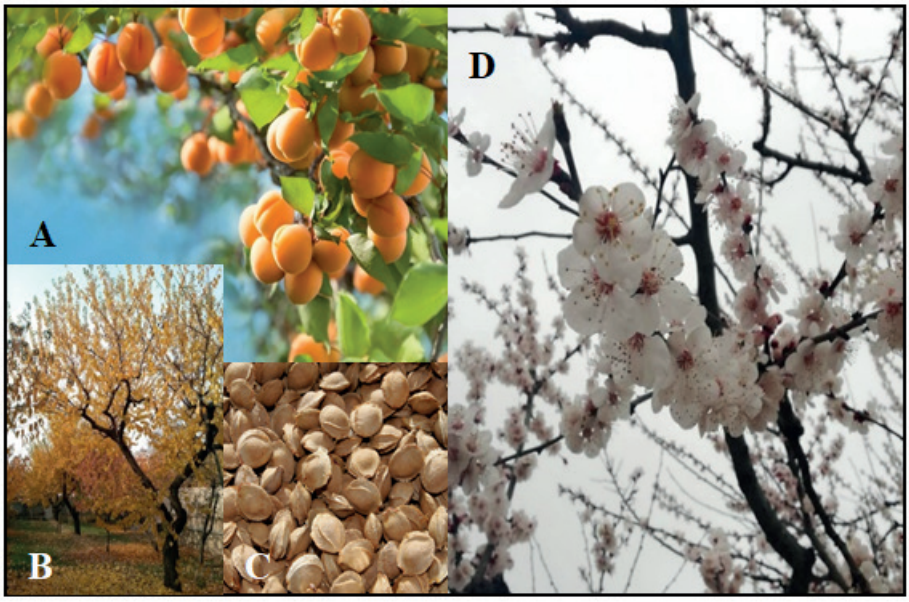

Figure 1. *Apricot tree (Prunus armeniaca) fruit (A:URL-1), form (B: Original), kernel (C: URL-2), flower images (D: Original)*

1.2.Ecological Requirements

Prunus armeniaca grows in regions where the relative humidity is at an appropriate level, with a cold and continuous winter, a dry and sunny hot summer season, where the seasons are completely separated from each other in terms of climate requirements. It is widely cultivated throughout Anatolia, except for the Eastern Black Sea Region with excessive rainfall and the very high and cold regions of Eastern Anatolia. Late spring frosts adversely affect apricot production. Apricots are generally grown as table fruit in the Mediterranean, Aegean and Marmara regions and mostly as dried fruit in the interior regions (Ercişli, 2004).

In terms of soil requirements, the apricot tree grows in the sunlit southern sides of the land, deep permeable, slightly sloping, warm and nutrient-rich loamy and slightly calcareous loamy, sandy loamy and humus soils that are sufficient in organic and inorganic nutrients.

1.3.History and Growing Areas

The most comprehensive information on the history of apricot and its development into a crop is found in China. The oldest record is from the Yu period of the Chinese Empire and describes how apricot farming was practiced. Many experts have different opinions about its spread from Central Asia to the West. One of them suggests that apricot was brought to Anatolia during Alexander the Great's Asian campaign. Another view is that apricots were brought to the West from their centers of origin by Silk Traders. According to another view, Roman soldiers played an important role in the spread of apricot by taking apricot with them to their country (Layne et al., 1996; Yang et al., 2019).

The homeland of apricot is known as Central Asia, Western China and Iran-Caucasia (Asma, 2007). It is a fruit species that is cultivated economically from Turkestan to Western China, especially in Mediterranean countries (Akın and Aygül, 2022). Soil characteristics and climatic conditions of our country allow many plant varieties to grow in agricultural production. Thus, one of the most important apricot production centers is Anatolia (Kargı et al., 2015).

The genetic origin of apricot, one of the fruits of commercial importance, is not Turkey. However, Turkey is the world's most important apricot producer in the fresh and dried apricot sector (Çemrek, 2011; Yılmaz et al., 2012; Alan et al., 2013; Aktoprak, 2018). Apricots grown in Turkey differ in color, flavor, sweetness and acidity compared to apricots grown in other countries and a significant portion of them are dried and used (Aslansoy and Aslan, 2016; Alan et al., 2013). According to the Food and Agriculture Organization of the United Nations (FAO) data, Turkey has taken the first place among apricot producing countries in the last 5 years. According to these data, Turkey is followed by Uzbekistan, Iran, Algeria, Italy, Afghanistan, Spain, Greece and Pakistan (Table 1). Approximately 75% of the world market is composed of dried apricots exported from Turkey (Aslansoy and Aslan, 2016).

Table 1. *World apricot production (thousand tons) (Hasdemir, 2022)*

Countries	2015	2016	2017	2018	2019	2020
Turkey	696	730	985	750	847	833
Uzbekistan	606	569	533	494	537	529
Iran	252	240	331	314	330	334
Algeria	293	257	257	242	209	187
Italy	218	237	266	229	273	173
Afghanistan	88	18	132	109	129	132
Spain	154	140	163	176	146	129
Greece	95	95	114	109	118	126
Pakistan	173	166	142	108	94	97
Morocco	104	71	113	102	110	93
Other	1274	1680	1757	1258	1250	1086

Malatya is the most important apricot growing area in Turkey in terms of geographical location, soil characteristics and climatic conditions (Asma et al., 2007) (Figure 2).

Figure 2. *Percentage distribution of apricot production in Turkey by provinces (Hasdemir, 2022; URL-3)*

Therefore, Malatya is the most important apricot growing region in Turkey and half of the apricot produced in our country is supplied from

Malatya (Şahin and Atay, 2021). When we look at apricot area, production and yield by provinces, Malatya ranks first in all 3 categories. According to Turkish Statistical Institute (TUIK), 2022 data, in the distribution of apricot production amount by provinces, Malatya is the province with the highest apricot production in Turkey with a share of 48.7%. Malatya is followed by Mersin with 20.3%, Iğdır with 5.4%, Elazığ with 3.9%, Isparta with 2.8%, Hatay with 2.6% and Kahramanmaraş with 2.3% (Table 2).

Table 2. *Apricot area, production and yield (thousand da, thousand tons, kg/tree) by provinces in Turkey (Hasdemir, 2022)*

Provinces		**2012**	**2015**	**2018**	**2021**
Malatya	Area	743	801	798	856
	Production	510	336	401	389
	Yield	72	45	53	50
Mersin	Area	72	68	72	86
	Production	47	108	89	162
	Yield	38	79	58	75
Elazığ	Area	83	96	98	102
	Production	39	18	52	31
	Yield	39	17	48	29
Iğdır	Area	19	27	34	39
	Production	18	38	36	43
	Yield	117	178	141	153
Kahramanmaraş	Area	92	89	89	89
	Production	13	80	30	19
	Yield	13	178	18	11

1.4.Uses and Benefits

Apricot, which is a type of fruit consumed fresh and dried, is dried and preserved with different methods because it continues to ripen after it is plucked (Şahin and Atay, 2021). Although apricot is not only a fruit consumed fresh and dried, its usage areas are diverse (Karataş, 2018; Akın and Aygül, 2022). Apricot is mainly used in the production of fruit juice and concentrates, but it is also used in a wide variety of areas such as molasses, pulp, pulp, nectar, canned, jam, marmalade, Turkish delight, jelly, cream, ice cream, chewing gum, confectionery, puree, wine, liquor, vinegar and pastry materials and cosmetics (Asma, 2007; Atış and Çelikoğlu, 2017).

Apricot fruits are rich in dietary fibers, proteins, fatty acids, sugars, micronutrients, carotenoids, volatile compounds, lignans, and phenolics,

carotene, the essential substance of vitamin A, and sodium and poor in potassium and have positive effects in the treatment of heart diseases, kidney diseases, liver diseases, hepatitis, cirrhosis and cancer (Alan et al., 2013; Kitic et al., 2022). Apricot fruit is also used medicinally to treat diseases, including use in antipyretic, infection-reducing, edema-reducing, emetic and eye drop medicines. It has many benefits, especially by ensuring the regular functioning of the brain, reducing stress, preventing anemia, bone and dental health. Rich in dietary fiber, dried apricots are also an important food for the regular functioning of the intestines (Sobutay, 2003).

The edible kernel and kernel oil are as important as the fruit (Layne et al., 1996; Gezer et al., 2009). Apricot kernels are also used in many fields such as health, cosmetics, industry and cleaning products (Çemrek, 2011). Sweet apricot kernels are consumed as snacks and the bitter ones are used in various fields, especially in cosmetics and pharmaceutical industry. Oil, benzaldehyde, fulfural, activated carbon, aroma essence, amygladin and hydrocyanic acid, apricot mask, soap shampoo are obtained from apricot kernel. The apricot kernel oil obtained has been widely used in dermatitis treatments (Gezer et al., 2009). Apricot kernel shell is used to produce apricot oil, edible oil, flavoring, furfural, activated carbon, amygladin and hydrocyanic acid and biofuel and biogas from these shells. Apricot stem, branch and seed shells are used as fuel and leaves can be used as animal feed (Tutuş et al. 2016).

Apricot tree wood is suitable for processing by hand or machine tools because it has straight and clear grains. For this reason, apricot tree wood can be used in making furniture, wood carving, wood shavings, musical instruments and handmade souvenirs (Ayata et al., 2021). In addition, since apricot wood is hard, it is a suitable raw material for paper pulp production and has high industrial value (Çavuş, 2020).

Apricot trees can reduce erosion by wrapping the soil like a net with their strong roots. The roots stabilize the soil against external factors such as rainfall and wind and prevent it from slipping (Avcı et al., 2017).

1.5.Landscape Value

Planting design constitutes one of the important stages of the landscape design process. The size, form, texture, smell, color and line features of plants, which are the living material of planting designs, are the design elements that designers benefit from (Kösa and Aksöğüt, 2020). Color in plants is an important feature that increases the perceptibility of plant designs. Especially flower colors and leaf colors in the autumn season draw attention as important accent elements in feeling the cyclical process of life (Figure 3) (Van der Walt and Breed, 2012). In addition to these, fruit, shoot, stem bark, leaf and seed

colors are also effective in diversifying the color effect (Eroğlu et al., 2005).

The orange leaves of *Pyrus communis* in autumn, the silvery grey leaves of *Olea europaea* and the burgundy leaves of *Purunus cerasifera* are very effective throughout the year and can provide a focal point and be used as accent plants (Dikmen and Yılmaz, 2021). *Rubus fruticosus* can be a very good boundary plant, even as a limiting species in places where it is desirable to prevent access because it is a thorny shrub (Aslan 2020). Fruit trees with effective flowers, such as *Malus domestica* and *Pyrus communis*, bloom in spring, increasing the seasonal potential of open green spaces.

Figure 3. The effect of leaf colors of plants in autumn (Prepared by Ezgi BOZ)

Prunus armeniaca creates effective images with its fragrant white flowers that bloom before leafing in spring and yellowing leaves in autumn. It adds value to landscape designs with its leaves and fruits in summer and the calligraphic feature of its branches in winter. With its different characteristics in four seasons, it makes users feel different emotions in the same space (Figure 4).

Figure 4. *Images of spring flowering (A: URL-4) and autumn coloration (B: URL-5) of Prunus armeniaca*

From an ecological point of view, apricot trees provide habitats for various animal species in the ecosystem. They can also help other plants to reproduce during the pollination process. In this way, they contribute to ecosystem services by increasing biodiversity. From a functional point of view, with their strong roots, they can be used in sloping areas and to create windbreaks.

In urban landscape design, fruit trees form an integral part of residential gardens, institutional and educational areas, public parks, streetscapes, community gardens, campuses, urban forests and greenways (Bulut et al., 2007). Fruit trees used in cities offer many ecological, economic, health, social and cultural benefits to urban dwellers (Çelik, 2017). Fruit trees encourage users to connect with nature by directly reaching the fruit in the places where they are located, prepare an educational environment for children such as recognizing the fruit and learning the development process, and become a source of food for people with low income (Güneroğlu and Pektaş, 2022). In addition, since fruits are edible, they increase the quality of life by creating a healthier life (Aslan, 2020).

In addition to these features, the fact that apricot is widely produced in Malatya makes it an urban identity element. Apricot in the city is quite remarkable both as a plant and in terms of the variety of products produced from the plant. In addition to its aesthetic, functional and ecological features, it also has tourism value as a cultural element (Güneroğlu and Bekar, 2016; Güneroğlu and Ercan Oğuztürk, 2019).

2. Conclusion and Recommendations

Edible landscapes refer to an approach that changes the traditional understanding of landscapes and integrates edible plants and food production in the design of housing, parks and other urban green spaces. Edible landscapes not only support food production, but also play an important role in environmental, economic and social sustainability. This approach

can contribute to a more sustainable use of natural resources and make local communities more resilient and self-sufficient.

Fruit trees form an important part of the edible landscape. Integrating fruit trees into urban green spaces provides many advantages. Due to these advantages, the use of edible fruit trees in today's urban green space designs has become widespread.

Apricot tree is one of the edible fruit trees. This plant should be included in different functions in urban green space designs. In addition, it can be evaluated as an alternative product for tourism purposes in Central Anatolia Region.

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CHAPTER 8

POSTER DESIGN AS A PRODUCT OF GRAPHIC ART: UNDERSTANDING SPACE

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1. Introduction

Art, which is a part of societal consciousness and culture, interprets and reflects the reality existing outside of itself in a unique manner, particularly in an aesthetic dimension. The common feature of all art forms is their inclusion of the power of intellectual and emotional expression. From both the artist's and the viewer's perspectives, the contribution of visual arts to understanding and comprehending the world in a visual manner is an undisputed fact. One such area of design and artistic expression based on visual images, which has held significant importance in all societies from the past to the present, is graphic design (Gümüştekin, 2013). The most fundamental design form of graphic art is the poster.

Posters are graphic products where design and art perspectives are equally weighted. A poster is defined as "a visual tool where the subject matter is effectively, informatively, and aesthetically presented" (Gündem, 1995). Becer (2011) also suggests that poster art serves the purpose of enabling clear, economical, and aesthetic communication of a message, creating a symbolic representation and presentation area.

Poster design is created through the combination of various elements such as photography, painting, illustration, typography, color, and line to form a visual design, and meaning is constructed based on the relationship between these elements (Çeken & Arslan, 2016). Poster design is used for advertising something or for the dissemination of various information, events, thoughts, and teachings through official news and propaganda. Posters are generally categorized into three groups: 1. Cultural posters (festivals, seminars, symposiums, concerts, cinema, theater, exhibitions, promotion of a place or space, and sports), 2. Social Posters (educational and advisory posters on topics such as health, transportation, civil defense, traffic, and the environment), and 3. Advertising Posters (posters promoting a product or service, fashion, industry, corporate advertising, press-publication, food, tourism, etc.). Regardless of the purpose for which a poster is made (theater-film-book poster, area-space promotion, product advertisement, event promotion-exhibition-discussion, etc.), it should be able to create meanings that enable evaluation in the mind of the viewer (Parsa, 2008). Users experience their initial impressions of the subject through the poster. Therefore, preliminary information about the content of the subject should be presented to the user through the poster. Subconscious control is exercised through posters, and users are provided with clues about the subject of the poster (Çeken & Arslan, 2016). Therefore, poster art is actually a form of communication, conveying a message through a printed and replicated image.

The key to effectively, informatively, and aesthetically conveying a subject lies directly in the success of poster design. The success of poster design is

highly proportional to its ability to influence, guide, and consequently, win the preferences of users. From this standpoint, answers to the question of how successful poster designs should be are sought through open space promotions.

2. Success in Poster Design

Ertep (2007) asserted that the success of poster design relies on its credibility. Thus, the forms, slogans (text), and colors used hold great significance. Perhaps the most crucial factor that can affect the presence of a poster is the message it conveys and the manner in which this message is delivered, namely its design. The primary challenge faced by a designer is the extent to which the message intended to be conveyed by the images used in their creations is understood or perceived accurately by the target audience, who are the recipients of that message. From the designer's perspective, this challenge is resolved by combining design elements with aesthetic considerations appropriately. The resulting product of this combination, i.e., the design, serves as an indicator of the designer's perspective, inquiry, interpretation, creativity, and/or aesthetic sensitivity towards the society and the world they inhabit (Gümüştekin, 2013).

Ünalan (2001) elucidated this by associating the aesthetic and functional dimensions of poster design. The functional dimension entails that if the design is considered to be part of the audience's life, it must address the needs of the target audience from both physical and psychological perspectives. In its function, the poster is a communication product between an active and correspondingly reactive force (Ertep, 2007). The functional aspect of poster design can be associated with how well the subject of the poster is reflected, how much information it provides to people about the content of the subject, and whether it is suitable for the characteristics of the target audience (age, gender, socio-economic status, education, experiences, etc.) (Alpak et al., 2023; Alpak et al., 2018a; Relph, 1976; Whyte, 1980; Punter, 1991; Montgomery, 1998; Mehta, 2009; Gehl, 2010).

The aesthetic dimension, on the other hand, involves the convergence of all design disciplines, where the visual elements constituting the design (scale, form, color, texture, material, etc.) are associated with design principles (harmony, contrast, unity, dominance, balance, coherence, etc.) (Alpak et al., 2018b; Bayramoğlu et al., 2019; Bayramoğlu and Seyhan, 2021; Seyhan and Bayramoğlu, 2023; Kurdoğlu et al., 2019; Yılmaz et al., 2016; Stewart, 2007; Wong, 1993). Alpak et al. (2018b) and Yılmaz et al. (2016) in their studies have associated design elements such as scale, form, direction with principles such as dominance, unity, coherence, harmony, and contrast, stating that this relationship ensures the creation of successful products syntactically, i.e., aesthetically. Stewart (2007) and Wong (1993) have used visual elements (forms-materials) that harmonize with each other (repetition-similarity) in their designs, directly associating this with creating systematic and aesthetically

successful designs. Özkan et al. (2017), in their studies, stated that by adding contrast to the harmonic principle they use in form, they overcome monotony. Thus, they showed that by preventing chaos in design, unity-coherence is achieved, and at the same time, variations in scales create dominant (focus) areas in the design (Alpak et al., 2018b; Yılmaz et al., 2020). Consequently, whether designed for cultural, social, or advertising purposes, to achieve successful poster design, it is essential to.

1. Functional Dimensions

• Level of information provided about the subject

• Level of engagement with the target user group

• Level of conveying the experiences of the space

2. Aesthetic Dimensions

• Design elements such as scale, form, color, texture

• Designs should be created considering design principles such as harmony, contrast, coherence, dominance

Within the scope of the Architectural Design Course (2+1) of the Department of Landscape Architecture at Karadeniz Technical University, poster designs were created for the promotion of open spaces, considering both functional and aesthetic dimensions. These posters were evaluated to assess whether they achieved success from both aesthetic and functional perspectives.

2.1. Open Space Promotion Posters: Understanding the Space

Open spaces are areas where various users come together, shaping daily activities, supporting social life, and thus establishing communal life (Fyfe, 1998; Simpson, 2011). When designing open spaces, determining user needs and desires should be the primary goal. Thus, an awareness of whom and for what purpose the space is created is formed. This awareness plays a crucial role in creating spaces that users will enjoy using.

Before users choose a space, they need to know what they might encounter, be able to anticipate what the space offers them, and determine whether the area meets their needs, which can only be achieved through the promotion of the space via posters. Posters are typically hung in places where people come and go, on walls, streets, and roadside, becoming a part of life. Open space posters should also become a part of life and be presented to users. This way, users can easily perceive what is suitable for them. This can be termed as 'Understanding the Space'. It means providing users with clues about what the space makes them feel, promises, and what they can experience before they actually use the space. It offers users the method of deduction-choosing/not choosing rather than trial and error.

As part of the Architectural Design course, students were asked to create poster designs that support users in understanding the space. Information such as which user group the space appeals to, what it promises to the user, and where in the city the poster will be displayed were left to the discretion of the student as the designer. The expected outcome from students is to complete poster designs that support the concept of 'Understanding the Space', covering both functional and aesthetic dimensions.

3. Method

The materials for this study were derived from the final projects conducted within the scope of the "Architectural Design (2+1)" course during the spring semester of the 2022-2023 academic year at Karadeniz Technical University's Department of Landscape Architecture. In the 2022-2023 academic year, students were tasked with creating open space poster designs. The poster designs created by students were examined in this study by the instructors who taught the course.

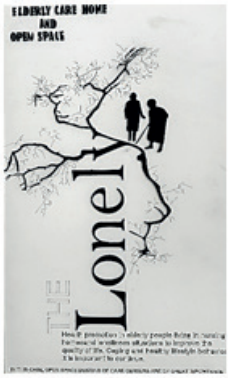
The aesthetic evaluation focused on how students integrated various design principles and elements they had experienced in previous terms into their poster designs as a cohesive whole. Meanwhile, the functional dimension of the evaluation aimed to understand which user group the space appealed to and how users could perceive what they could experience in the space without physically visiting it.

4. Findings

In total, 68 students were enrolled in the Architectural Design course. Within the scope of this study, the poster designs of three students were evaluated. Examples of the poster designs created by the students are shown in Figure 1. Detailed information regarding the poster designs and their evaluations for the three students under consideration is provided in Tables 1, 2, and 3.

Figure 1. *Poster Design Examples*

Table 1. *1st Student's Poster Design and Evaluation*



Topic: Poster Design for Elderly Open Spaces

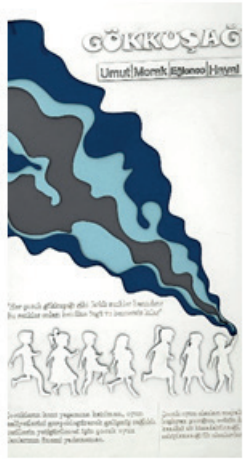
Designer's Objectives: Elderly people, especially after retirement, often experience feelings of loneliness. It is essential for them to spend time with their peers and reintegrate into social life. Therefore, I designed a poster for an open space where the elderly can spend time with their peers and overcome loneliness. In the design, I used black and white contrast colors to emphasize loneliness, with a dominant element being a tree representing the elderly, and the tree branches symbolizing their life experiences.

Functional	Aesthetic
1. Level of Providing Information Related to the Topic: Tasarlaması için istenilen mekân afişi, yaşlılara yönelik bir mekandır. Öğretim üyelerinin yaptığı değerlendirme: Afiş yalnızlık hissi duyan yaşlı grubunun ihtiyaçlarına yönelik bir mekân hissi uyandırmaktadır. **2. Level of Relationship with the Target User Group:** An open space poster design tailored to the needs of the elderly is expected. In this regard, the selection of human figures depicted in the poster as elderly individuals and the choice of a rooted tree symbolizing the experiences and life history of the elderly have been found to be relevant to the target user group. **3. Level of Conveying Experiences:** The poster creates an impression of experiencing activities such as socializing, walking together, and exploring in the space.	The aesthetic dimension of the design has been evaluated based on the harmonic, contrast, dominance, balance principles associated with design elements such as material, form, scale, color, texture, and typography, examining whether the design exhibits coherence. The dominance principle has been utilized to highlight the given topic in the design. By employing the contrast principle in terms of color and typography, balance is achieved in the design, while harmony in formal approaches ensures unity. Contrast in directions has prevented monotony and supported the poster in being attention-grabbing and engaging. The application of these principles has ensured the attainment of aesthetic success in the design.

Table 2. *2 nd Student's Poster Design and Evaluation*

	Functional	Aesthetic
 **Topic:** Poster Design for Youth Open Spaces **Designer's Objectives:** Young individuals aspire to freedom, the ability to pursue their desires, spend time with friends, and engage in energetic, dynamic activities. Envisioning an open space tailored for young people, I designed a poster that allows for various activities simultaneously, without restricting their freedoms. In the design, I utilized contrast in the dimensions of color and shapes. When selecting shapes, I paid attention to their harmony with each other to achieve coherence.	**1. Level of Providing Information Related to the Topic:** The poster appeals to young people by emphasizing freedom and diversity. **2. Level of Relationship with the Target User Group:** An open space poster design tailored to the needs of young people is expected. In this regard, the selection of birds representing the energetic and dynamic nature of young individuals, along with the use of black and white pawns of different sizes to express their variable structures and diversity, has been deemed relevant to the target user group. **3. Level of Conveying Experiences:** The poster creates an impression of experiencing lively, energetic, and free-spirited behavior, along with the ability to engage in various activities simultaneously within the space.	The principle of dominance is utilized to highlight the dynamic nature of young people's behavior and movements. Contrast in terms of color provides balance in the design, while harmony in formal approaches ensures unity. Contrast in the directions of the birds representing the youth has overcome monotony. The relationship between the design elements and principles has ensured the achievement of aesthetic and syntactic success in the design.

Table 3. *3rd Student's Poster Design and Evaluation*



Topic: Çocuklar İçin Bir Açık Mekân Afiş Tasarımı

Designer Objectives: Children desire to explore, play games, and engage in colorful, attention-grabbing activities without getting bored. Considering that an open space designed for children should be colorful and dynamic, without restrictions such as climbing, descending, or jumping, I created a poster design. I utilized rhythm to emphasize the dynamic nature of the space and used contrast in the dimensions of colors and shapes. When selecting shapes, I ensured they were harmonious with each other to achieve unity and coherence.

Functional	Aesthetic
1. Level of Providing Information Related to the Topic: The poster targets children by highlighting attributes such as dynamic, colorful, and cheerful. **2. Level of Relationship with the Target User Group:** An outdoor space poster design targeting children is expected to be created. In this context, the poster emphasizes the colorful nature of children with the slogan (Rainbow), the selection of playful children as human figures, and the use of formal approaches indicating the dynamic nature of the space, which are found to be relevant to the user group. **3.Level of Conveying Experiences::** The poster conveys the impression of an experience where children can engage in activities such as climbing, jumping, and exploring, within a colorful, dynamic space that includes various topographic features.	The principle of dominance has been employed in the poster to highlight the dynamic nature of children by selecting larger shapes and using contrasting colors at the focal points of the poster. Additionally, the principle of harmony has been utilized to emphasize the importance of the experiences within the space. Contrast principles in terms of color have been employed to enhance the attractiveness of the poster. Furthermore, to achieve a balance between filled and empty spaces, clear voids have been created in certain areas while ensuring fullness in areas of interest, utilizing the principle of contrast. The application of these design principles and elements has contributed to the achievement of aesthetic success.

As a result of the evaluations, it has been determined that the posters created by the students regarding the open space design topics provided to them are relevant to their respective subjects. The use of design principles and elements indicates that the students have created comprehensive poster designs that are both functional and aesthetic. They have successfully applied the fundamental concepts they have experienced in basic design courses to create a final product under a different design topic (posters) in another course.

5. Results

Poster applications are crucial graphic design elements in conveying information or messages to the target audience. Posters are where aesthetic language is most effectively and economically utilized and should be attention-grabbing. This attention-grabbing period should be brief, and information should be conveyed in order of importance all at once. Because people can focus their attention on something for a short period. Within this short timeframe, the poster must be both informative about the subject and aesthetically appealing. Aesthetic language is everything in poster design; it serves as design elements that contribute to the formation of the poster design. The mastery, skill, and creativity of the designer who brings these elements together directly influence the success of the poster.

Poster design is typically used to reach audiences of events closely related to and informing societies socially, such as cinema, theater, exhibitions, and festivals, utilizing creative graphic expression techniques. Poster design is not seen to be extensively used for purposes such as open space promotion. Open spaces hold significant importance in human life because urban areas are the first places people turn to in order to participate in social life and become part of society. Therefore, people have the right to have an idea of what a space offers them and how it contributes to their experiences before going there. Thus, instead of trial and error, they can use their rights to choose and use the space based on prior knowledge. These opportunities can be provided to people through space promotion, namely posters.

This study produced examples of poster designs for open spaces tailored to the needs of different user groups (elderly, young, children). People are constantly in a consumption cycle, and this consumption process causes designs that are ongoing and ordinary in cultural poster applications to become uninteresting. People who constantly seek novelty and diversity want to see the results of their curiosity in poster designs as well. Therefore, creativity, i.e., aesthetics, and functionality, i.e., suitability for purpose, were addressed in poster applications, presented to landscape architecture students. The principles and elements of design are universal. A landscape architecture student's design education has enabled them to successfully create promotional posters related to open space design, which is their area of expertise

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