

KENT FORMUNUN KIYIYA ERİŞİM ÜZERİNDEKİ ETKİLERİ: KARŞIYAKA VE MAVİŞEHİR ÖRNEĞİ¹**Arş. Gör. Duygu AKYOL²**
Arş. Gör. Abdullah ÇİĞDEM³**Özet**

Kıyı alanları kentlerin en çekici ve en çok kullanım talebi olan alanlarıdır. Kıyıların kentin bütününden ayrı parça değillerdir. Kıyıları, kıyı gerisindeki kullanımlar ve kentsel öğeler ile bütünleşmelidirler. Bu nedenle kıyı alanları tasarlanırken, kıyı alanında yer alacak olan kullanımların çeşitliliği, kullanıcı profilleri, kıyı gerisindeki kullanımların, kentsel form oluşumlarının, sokak ağının, bağlantı noktalarının, çok iyi analizinin yapılması gerekmektedir. Oysa bugün yaşadığımız şehirlerde kıyı alanlarının bütününe tek özelliğe sahip bir sahil şeridi olarak görüldüğü ve kıyıların tek düze, birbirinin tekrarı olan peyzaj tasarımları ile düzenlendiği görülmektedir. Bu çalışmada, aynı işlevde fakat farklı nitelikte 2 örnek alan olan Karşıyaka ve Mavişehir kıyı şeridindeki kent formu ve kıyı mekânındaki çeşitli nedenlerden kaynaklı erişim ve kullanım sorununun incelenmesi amaçlanmıştır. Yeni Şehircilik (New Urbanism) ve Akıllı Büyüme (Smart Growth) olarak adlandırılan yeni kentsel gelişme stratejileri ışığında, Mavişehir-Karşıyaka kıyı şeridindeki mevcut kentsel ve kıyı dokusunun irdelenmesine yer verilerek öneriler sunulacaktır.

Anahtar Kelimeler: Yeni kentleşme, kıyı, kent formu, akıllı büyüme**THE EFFECTS OF URBAN FORM ON ACCESS TO COASTLINE: THE EXAMPLE OF KARSİYAKA AND MAVİŞEHİR****Abstract**

Coastal areas are the most attractive and most demanding areas of cities. The coasts are not separate parts of the whole city. Coasts should be integrated with coastal uses and urban items. For this reason, when designing coastal areas, a very good analysis of the diversity of uses in coastal areas, user profiles, coastal uses, urban formations, street networks, connection points, etc. needs to be made. However, in cities we live in today, it is seen that all of the coastal areas are seen as a coastline with the unique feature and the coasts are arranged by the single landscape. In this study, it will be mentioned the advantages and disadvantages of access and use from various reasons in urban form and coastal area of Karşıyaka and Mavişehir coastal area which have the same function but two different characteristics. In the light of the new urban development strategies called New Urbanism and Smart Growth, suggestions will be made regarding the analysis of the existing urban and coastal land on the coast of Mavişehir-Karşıyaka.

Keywords: New urbanization, coastal, urban form, smart growth

1

Özgün Araştırma / Original Article

¹Bu çalışma 2. Uluslararası Bilimsel Araştırmalar Kongresi – İnsan ve Toplum Bilimleri (IBAD-2017) sempozyumunda sözlü bildiri olarak sunulmuştur.

²Sorumlu yazar/Corresponding Author:Karadeniz Technical University, TURKEY, duyguakyol@ktu.edu.tr

³Karadeniz Technical University, TURKEY, abdullahcigdem@ktu.edu.tr

1.INTRODUCTION

Important functions that could be significant for the urban form such as circulation, large space uses, important focal points are present in the city, the perceptions, tastes and requirements of the users create these functions. Above all, if the environment is visually organized and strictly defined, the urbanite would shape the city with the explanations and the associations it created (Lynch, 2012).

Especially, it is significant that the road network, which maintains the city and connects different elements of use is easily accessible and sustainable. On the other hand, the urban form which is a result of rapid urban development and the increasing urban sprawl pose a risk not only for the design aspect but also for urban sustainability. Thus, considering the functional and aesthetic criteria as well as the ecological, and as a result, compact urban design and prevention of decentralization enable walking distance spaces in the cities, so that alternative transportation such as bicycle routes instead of vehicle routes start emerging in urban areas(URL,2).

In this context, several development models were introduced as a solution to the problems created by urban decentralization in recent years. New urban development strategies, called **New Urbanism** and **Smart Growth**, focus also on mixed land use, sustainable transport, compact form, ecological balance, prevention of all types of pollution and protection of the environment. Solutions for the prevention of the substitution of natural areas with urban spaces in a rapidly urbanizing world due to the population increase, and for existing urban problems are presented by the abovementioned urban models(Sımmaz,2012).

In the present study, the access and use problems due to various reasons related to urban form in Karşıyaka and Mavişehir coastal spaces in Izmir province, which have the same function but with two different characteristics, will be addressed. Solution proposals for revitalization of coastal spaces especially in Mavişehir that are not used due to aesthetic and functional problems and also in Mavişehir section, to enable access to the coastal spaces that was prevented by the urban texture, namely the closed condominiums were addressed with new urban development strategies called **New Urbanism** and **Smart Growth** and existing urban and coastal textures in Mavişehir- Karşıyaka coastline are compared.

2.STUDY AREA

In the present study, two study areas with different physical characteristics were selected in İzmir province to investigate the problem of access to the coastal zone. The first zone begins with the western coastline border line in the Mavişehir neighborhood and spans an area limited by the İzban (urban) railway line to the north and the composer Yusuf Nalkesen Street to the east. The second area in Karşıyaka is limited by Girne Boulevard to the west, 1671th street to the north and İbrahim Yılmaz Street to the east. The distance between the northernmost border of both areas and the coastline is approximately 1.5 km. The most important criterion in selecting these sites as the study area was that the access to coastline in these two areas have different physical characteristics. While the coastal zone in Karşıyaka is used actively in all hours of the day, it is not possible to argue the same for the coastal zone in Mavişehir neighborhood.



Figure 1. Karşıyaka study area boundaries



Figure 2. Mavişehir study area boundaries

With the introduction of the coastal zoning law in both areas, the coastal zone expansion works were initiated and completed in 2000 and their use was facilitated. In Mavişehir study area, coastline length is 3 km and in Karşıyaka area it is 1.5 km. Both areas were paved with concrete, only in Bostanlı section, the ground is paved with large slate stones in the area close to the coast. However, pavement in Karşıyaka area is more proper and convenient for use. In the Mavişehir study area, the pedestrian path and the bicycle path are located on the same route and differentiated only with signs are placed on the ground. In Karşıyaka area, the pedestrian route is available mostly near the coastline, while the bicycle path is located in the area close to the road on the land side of the green zone and is more visible due to the ground placement of the signs.

There are several activity areas that are used for diverse functions in Bostanlı coastline within the Mavişehir study area. Examples to these diverse functions are basketball, tennis, and volleyball courts, canoe activities, picnic areas, etc. The total area in which all sports activities are conducted is 12,000 square meters. In Karşıyaka study area, there is a picnic and sailing club areas. While Mavişehir study area does not have a distinct green zone from the northernmost border to the Bostanlı area, while there are wide green zones from Bostanlı area to the final border line of the study area. In Karşıyaka, the green zone is visible throughout the entire study area.

3. MATERIAL AND METHOD

In the present study, the most important criterion was the method that provides access for the interior area to the coastline in the two scrutinized areas. The response to this important criterion was tested by asking questions such as what is the reason of the existence of the obstacle if there is an obstacle to the access to the coastline and what is the reason if there is no obstacle to access.

Two methods were used in the field to determine user behavior and user satisfaction. 1) Time based observation 2) Survey. The time-based observation study was conducted to determine the direction the user used to enter the area, which route the user followed to move towards the inland, and to determine how frequently the fields were preferred and at what time of the day and which age groups frequented the areas. The survey, on the other hand, was conducted to determine the purpose of the users for visiting the area and which parts of the city they came from.

The observation study was completed in May 2013 within 4 days, one weekday and one weekend day for each study area. 6 observation spots were established within the boundaries of Mavişehir study area. The observations were conducted between 10:00 and 11:00 am and between 14:00 and 15:00 pm during the day. Especially, these clocks have the ideal time interval for the activities determined within the scope of the selected work .In 6 observation spots established within the Mavişehir study area, observations were conducted between 10:00 am and 11:00 am by standing and noting the number of individuals, their gender and age group on the observation chart for 10 minutes. On the same day in the same time interval, observations were conducted at 6 observation spots using the same method in Karşıyaka study area as well. Observations based on the same plan was also conducted between 2:00 pm and 2:00 pm in both study areas.

In the survey studies, 20 individuals were interviewed (40 individuals in total) on weekdays and weekends in each study area. The survey form included questions about the age group, gender, the purpose of using the area, where the user came from to collect the required data.

4.RESULT AND DISCUSSION

Findings of the study were evaluated in two categories of survey and observation results.

OBSERVATION POINT NO: 1	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs	Mr	Mrs	Mr.	Mrs.	Mr.	Mrs	Mr.	Mrs	Mr.	Mrs	Mr.	Mrs.	Mr.	Mrs	Mr
10.00-11.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.00-15.00	1	1	2	5	1	7	-	-	1	4	2	5	3	9	-	1
OBSERVATION POINT NO: 2	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr
10.00-11.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.00-15.00	-	-	-	2	1	7	-	-	-	1	3	2	5	1	-	-

OBSERVATION POINT NO: 3	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs	Mr.	Mrs	Mr.	Mrs	Mr	Mrs	Mr.	Mrs	Mr.	Mrs	Mr.	Mrs.	Mr	Mrs	Mr
10.00-11.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.00-15.00	1	1	1	3	7	9	-	-	-	1	1	1	1	3	1	-

Table 1; Example of observation made between 10:00-11:00 and 14:00-15:00in Karşıyaka study area

The directions 1 and 2 in the observation chart were used to indicate in which direction the users proceeded when they were at the observation spot. Direction 1 depicts those who were moving towards Mavişehir and Direction 2 depicts those who were moving towards Karşıyaka. Based on the obtained findings, the direction traffic map will be derived and as a result, data about the reason of this usage intensity difference between the two fields will be obtained.

OBSERVATION POINT NO: 4	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs	Mr.	Mrs	Mr	Mrs	Mr	Mrs	Mr.	Mrs	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr
10.00-11.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.00-15.00	4	-	2	5	9	8	-	2	6	4	11	6	2	5	2	3

OBSERVATION POINT NO: 5	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs	Mr.	Mrs.	Mr	Mrs.	Mr.	Mrs	Mr.	Mrs.	Mr.	Mrs	Mr	Mrs	Mr	Mrs.	Mr
10.00-11.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.00-15.00	4	2	5	3	8	10	-	6	-	7	3	8	2	4	1	1

OBSERVATION POINT NO: 6	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs	Mr	Mrs.	Mr	Mrs.	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr	Mrs	Mr
10.00-11.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.00-15.00	3	5	11	14	17	38	3	9	3	5	7	8	9	14	2	5

Table2;Example of observation made between 10:00-11:00 and 14:00-15:00in Karşıyaka study area



Figure 3; View from work area



Figure 4; View from Mavişehir work area



Figure 5; View from work area



Figure 6; View from Mavişehir work area

OBSERVATION POINT NO: 1	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.
10.00-11.00	-	2	3	3	3	11	-	-	1	1	-	-	-	-	-	-
14.00-15.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OBSERVATION POINT NO: 2	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.
10.00-11.00	-	1	-	4	2	5	-	-	-	2	1	2	2	-	-	-
14.00-15.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OBSERVATION POINT NO: 3	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.
10.00-11.00	-	1	-	2	1	-	-	1	2	2	-	-	-	-	-	-
14.00-15.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

OBSERVATION POINT NO: 4	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs	Mr	Mrs.	Mr	Mrs	Mr.	Mrs	Mr	Mrs.	Mr	Mrs.	Mr	Mrs.	Mr.	Mrs.	Mr.
10.00-11.00	-	-	2	1	1	1	-	-	-	3	7	2	-	6	-	-
14.00-15.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

OBSERVATION POINT NO:5	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs	Mr.	Mrs	Mr.	Mrs	Mr.	Mrs	Mr.	Mrs	Mr.	Mrs	Mr.	Mrs	Mr.	Mrs	Mr
10.00-11.00	-	1	-	1	1	1	-	1	2	1	0	1	2	1	-	-
14.00-15.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

OBSERVATION POINT NO:6	DIRECTION 1								DIRECTION 2							
	Elderly		Adult		Teenager		Child		Elderly		Adult		Teenager		Child	
	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.	Mrs.	Mr.
10.00-11.00	-	2	-	1	1	1	-	1	2	1	2	2	2	-	-	1
14.00-15.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table3 ;Observation example made between 10: 00-11: 00 and14:00-15:00in Mavişehir work area

Observation findings demonstrated that 105 out of 485 users were located in Mavişehir study area and 380 were located in Karşıyaka study area. While the rate of young users in Mavişehir was high, the number of young adults and elderly users in Karşıyaka was proportionally close to that of Mavişehir. At Mavişehir, the intensity during morning and evening hours was stable, while the intensity at Karşıyaka was higher around noon was higher when compared to morning hours. Direction analysis demonstrated that direction 1 rate was higher in Mavişehir and direction 1 and direction 2 rates were almost similar in Karşıyaka.

OBSERVATION POINT MAVIŞEHİR	10:00-11:00														
	DIRECTION 1					DIRECTION 2					TOTAL				
	Elderly	Adult	Teenager	Child	Total Direction 1	Elderly	Adult	Teenager	Child	Total Direction 2	Elderly	Adult	Teenager	Child	Direction 1+Direction 2 Total
1	2	6	14	0	22	2	0	0	0	2	4	6	14	0	24
2	1	4	7	0	12	2	3	2	0	7	3	7	9	0	19
3	1	2	1	1	5	2	0	0	0	2	3	2	1	1	7
4	0	3	2	0	5	3	9	6	0	18	3	12	8	0	23
5	2	1	2	1	6	3	4	2	1	10	5	5	4	2	16
6	2	1	2	1	6	3	4	2	1	10	5	5	4	2	16

Table 4; Mavişehir Study area observation results

OBSERVATION POINT KARŞIYAKA	14:00-15:00																
	DIRECTION 1					DIRECTION 2					TOTAL						
	Elderly	Adult	Teenager	Child	Total Direction 1	Elderly	Adult	Teenager	Child	Total Direction 2	Elderly	Adult	Teenager	Child	Total	Direction 1+Direction 2 Total	
1	2	7	8	0	17	5	7	12	1	25	7	14	20	1	42	66	
2	0	2	8	0	10	1	5	6	0	12	1	7	14	0	22	41	
3	2	4	16	0	22	1	2	4	1	8	3	6	20	1	30	37	
4	4	7	17	2	30	10	17	7	5	39	14	24	24	7	69	92	
5	6	8	18	6	38	7	11	6	2	26	13	19	24	8	64	80	
6	8	25	55	12	100	8	15	23	7	53	16	40	78	19	153	169	

Table 5; Karşıyaka study area observation results

4.1 Survey Results

		Study Area		Total
		Karşıyaka	Mavişehir	
User profile	Elderly	4 33,3%	8 66,7%	12 100 %
	Adult	8 61,5%	5 38,5%	13 100%
	Teenager	6 50%	6 50%	12 100 %
	Child	2 66,7%	1 33%	3 100, %
Total		20 50%	20 50%	40 100%

Table 6; Percentage of age group according to survey results

The survey results showed that in Mavişehir, 40% of the users were elderly, 25% were adults, 30% were teenager individuals and 5% were children. In Karşıyaka, 20% were elderly, 40% were adults, 30% were teenager individuals and 10% were children.

		Study area		Total
		Karşıyaka	Mavişehir	
Frequency of coming	Everyday	8 40%	2 10%	10
	A few days a week	2 20%	8 40%	10 100%
	Once a week	6 75%	2 10%	8 100%
	Fortnightly	2 33,3%	4 20%	6 100%
	Once in a month	1 5%	1 5%	2 100%
	Rare	1 5 %	3 15%	4 100%
Total		20 100%	20 100%	40 100%

Table 7; Percentage of people coming to the area according to survey results

Frequency of use findings demonstrated that 10% of users visited the area every day in Mavişehir, 40% visited the area a few days every week, 10% visited once a week, 20% visited once every two weeks, 5% visited once a month, and 15% visited the area rarely.

In Karşıyaka, 40% of users visited the area every day, 10% visited the area a few days every week, 30% visited once every week, 10% visited once every two weeks, 5% visited once a month, and 5% visited the area rarely.

		Study Area		Total
		Karşıyaka	Mavişehir	
Activity preferences	Walking/Running	1 5%	5 25%	6 15%
	Entertainment	3 15%	2 10%	5 12,5%
	Eating and drinking	1 5%	2 10%	3 7,5%
	Riding a bike	1 5%	4 20%	5 12,5%
	Get rest	5 25%	3 15%	8 20%
	Trade	1 5%	0	1 2,5%
	Have a picnic	1 5%	0	1 2,5%
	Cruise	2 10%	1 5%	3 7,5%
	Fishing	2 10%	1 5%	3 7,5%
	Children's playground	1 5%	0	1 2,5%
	Others	2 10%	2 10%	4 10%
Total		20 100%	20 100%	40 100,0%

Table 8; Percentage of different activity preferences according to survey results

Diversity of usage findings in the study area demonstrated that 5% of the users visited the area for walking and running , 15% for entertainment, 5% for food and beverages, 5% for biking, 25% for leisure activities, 5% for picnicking, 10% for watching around, 10% for fishing, 5% to use the children's playground, 5% for trade (peddlers), and 20% preferred the area for other purposes in Karşıyaka.

In Mavişehir, 25% of the users visited the area for walking and jogging, 10% for entertainment, 20% for biking, 15% for leisure activities, 0% for picnicking, 5% for watching around, 5% for fishing, 0% to use the children's playground, 0% for trade (peddlers), and 10% preferred the area for other purposes.

		Study Area		Total
		Karşıyaka	Mavişehir	
Transportation types	By foot	9 45%	4 20%	13 32,5%
	By bicycle	2 10%	1 5%	3 7,5%
	By public transport	1 5%	4 20%	5 12,5%
	By private vehicle	8 40%	11 55%	19 47,5%
Total		20 100%	20 100%	40 100,0%

Table 9; According to survey results conducted in the study area, preference rates of different transportation types

While 45% of the visitors walked to the study area in Karşıyaka, 20% visited Mavişehir on foot, 10% biked to the area in Karşıyaka, and 5% in Mavişehir, 5% used public transportation to arrive in Karşıyaka and 20% used the same method in Mavişehir. The rate of those who arrived with private vehicles was 55% in Mavişehir and 40% in Karşıyaka.

		Study Area		Total
		Karşıyaka	Mavişehir	
Place of residence	Karşıyaka	8 40,0%	12 60,0%	20 50%
	Others	12 60,0%	8 40,0%	20 50%
Total		20 100%	20 100%	40 100%

Table 10; Percentage of people who came from the area of Karşıyaka or other districts according to the results of the survey conducted in the study area

Among the users that came from neighborhoods around Karşıyaka study area, 40% came from Yalı, 25% from Alaybey, 25% from Mavişehir, while those who came from other neighborhoods were distributed as follows: 60% from Konak, 15% from Bayraklı, 40%, from Karabağlar, 15% from Menemen, and 15% from Çigli.

Spatial behavior of users demonstrated that the questionnaire and observation results were consistent. Even though the frequency of those who arrived at Karşıyaka was higher, the same was not true for Mavişehir study area. Furthermore, based on the means of transportation, public transportation was more popular in Karşıyaka area, whereas private vehicles were mainly utilized in Mavişehir. Based on the general answers of the users in the entire study, it was determined that both the area residents and the inhabitants of the city experience difficulties in accessing the coastline in Mavişehir study area and thus, the area was not preferred. Karşıyaka

was advantageous in this case, because the form of the area facilitates access to the coastline for both local residents and urbanites.

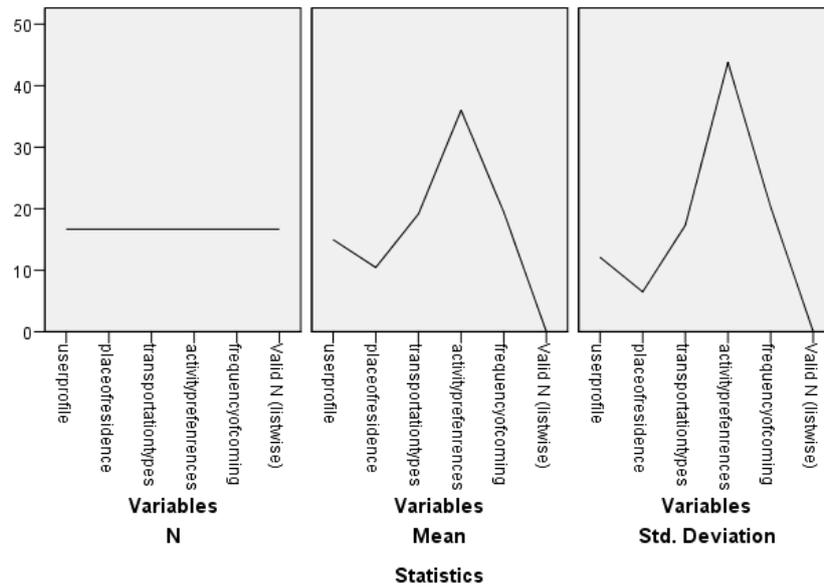


Figure 7; Descriptive statistic

CONCLUSION

The user density in spaces is directly proportional to its functionality and aesthetics. Naturally, in today's conditions, ecological concerns are significant in addition to functionality and aesthetic qualities. Urban population increases rapidly, and cities that develop with a rapid expansion policies turn into threats for the environment as well.

Urban form and road network planning, especially when centered on the use of private vehicles, often causes traffic problems, and on the other hand creates an obstacle to the sustainability of cities. Analysis of the study area demonstrated that gated communities in Mavişehir area obstruct the access to the coastline substantially. As a matter of fact, as the width of the area where gated communities are located increases, access becomes particularly difficult for particularly pedestrians. Especially, there are similar problems in accessing the coastline where the İzban- Mavişehir light rail stop is located. On the other hand, the lack of a public bicycle route in the area encourages the use of private cars due to the weak public transportation, which is observed more heavily in the area with upper income group residences.

On the other hand, there are considerable problems in user activities in the coastline when compared to Karşıyaka. Especially, in the section from the westernmost starting point to the channel at Mavişehir coastline, there is no space for public activities and the area is quite neglected., therefore, most of this section is not used by the residents. Almost all users in the above-mentioned section are the residents of Mavişehir neighborhood, and users from other districts do not prefer this section. Furthermore, the fact that the Mavişehir neighborhood is gradually expanding towards İzmir Belt Highway further increases the present problems of access.



Figure 8; The impact of indoor housing sites on urban form in Mavişehir



Figure 9; The impact of urban form in Karşıyaka

As a result, the fact that urban fabric and form in Karşıyaka allow access to the coastline along with different transportation alternatives, furthermore, coastline design directing the users towards different activities, increase the intensity of use in this area when compared to Mavişehir. However, it is obvious that the current situation in both areas is far from sufficient for both access to the coastline and the use of the also obvious that the current situation is not

sufficient both for access to and the use of the coastline. Unsustainable urban planning of today which is far from urban macroform formation efforts, transfer of the problems that emerge in the planning stage to the design scale cause unqualified, dysfunctional, unperceivable, ambiguous and unsustainable spaces to be created, and thus, these spaces are not preferred by the users and result in lifeless spaces.

It is possible to overcome many of the problems mentioned above by creating sustainable urban approaches. For this purpose, it is necessary to adopt the principles of New Urbanism and Smart Growth ;

Sustainable transportation; walkable cities;

- Conservation of non-renewable resources (water, etc.)
- Renewable energy use (wind, solar, etc.)
- Urban intensification and integration
- Urban growth management
- Compact cities
- Protection and conservation of natural reserves and the environment
- Construction of new green areas
- Mixed land and building use
- Participation of citizens in planning decisions
- Design of spaces for all kinds of users

Thus, the application of these principles and the enforcement of legal regulations to solve the problems in the study area constitute the basic needs of all cities. In this context, local governments have significant duties.

REFERENCES

- Batty, M. 2005. *Cities and Complexity: Understanding Cities with Cellular Automata, Agent-Based Models, and Fractals*. London, England: The MIT Press.
- Biçakcı, H. (2014). *Yeni kent tasarımı ve akıllı kentler: Karşılaştırmalı bir analiz ve Samsun için model önerisi*. Ondokuzmayıs Üniversitesi Sosyal Bilimler Enstitüsü, Yayınlanmış Yüksek Lisans Tezi, Samsun.
- Blumenfeld, H. (1943). Form and Function in Urban Communities. *Journal of the American Society of Architectural Historians*, 3(1), pp, 11-22.
- Chen, Y.G. (2012). Fractal Dimension Evolution And Spatial Replacement Dynamics Of Urban Growth. *Chaos, Solitons & Fractals*, 45 (2): 115-124.
- Crocks, A., Pfoser, D., Jenkins, A., Croitoru, A., Stefanidis, A., Smith, D., Karagiorgou, S., Efenakis, A., and Lamprianidis, G. (2015). Crowdsourcing Urban Form And Function. *International Journal of Geographical Information Science*, 29(5), pp, 720-741.
- Doherty, M., Nakanishi, H., Bai, X., and Meyers, J. Relationships Between Form, Morphology, Density And Energy In Urban Environments. URL(1); http://www.iiasa.ac.at/web/home/research/Flagship-Projects/Global-Energy-Assessment/GEA_Energy_Density_Working_Paper_031009.pdf. 18.02.2017.
- Jacobs, C., Kompil, M., Baranzelli, C., and Lavallo, C. (2015). Indicators of Urban Form and Sustainable Urban Transport. JRC Technical Reports, pp, 3-32, Italy. Doi:10.2788/5961.
- Karagülle, D. (2011). *Kentsel Saçaklanmanın Doğal Eşiklere Mekansal Etkisi, İstanbul Çekmeköy Üzerine Bir Çalışma*. Mimar Sinan Güzel Sanatlar Üniversitesi, FBE, Şehir

ve Bölge Planlama Anabilim Dalı, Kentsel Tasarım Programı, Yüksek Lisans Tezi, İstanbul.

- Lynch, K.(2012). *Kent İmgesi* (İ. Başaran, Çev.), Türkiye İş Bankası Kültür Yayınları, IV. Basım, İstanbul.
- Makse,H., Havlin, S., and Stanley, H. E.(1995). Modelling urban growth patterns. *Nature*, 377,pp, 608-612.
- Sınmaz,S.(2013).Yeni Gelişen Planlama Yaklaşımları Çerçevesinde Akıllı Yerleşme Kavramı ve Temel İlkeleri. *Megaron*, 8(2), pp.76-86.
- Simin,D., John,S.(2017). Urban Form, Policy Packaging and Sustainable Urban Metabolism. *Resources, Conservation and Recycling*, V. 120, p.55–64.
- Smith,D., Crooks,A.(2010). From Buildings to Cities: Techniques for the Multi-Scale Analysis of Urban Form and Function.UCL Working Paper Series Books,pp,1-59, London’s Global University Press, London.
- Tekin, H. A.(2010). *Kentsel Tasarımda Yeni Şehircilik Yaklaşımı ve Kadıköy – Yeldeğirmeni Örneği*, İstanbul Teknik Üniversitesi, FBE, Disiplinlerarası Anabilim Dalı, Kentsel Tasarım Programı, Yüksek Lisans Tezi, İstanbul.
- Thakur, P.,Kinghom, R., and Grace,R.(2016).Urban Form and Function in The Autonomous Era.Austrian. URL(2); http://atr.info/papers/2016/files/ATRF2016_paper_138.pdf.10.03.2017.
- Walcott, S.(2009). Urban Shanghai: Form, Function and Planning Challenges.China Currentts.8(1), pp, 22-31.
- Venables, A.J.(2016). Breaking Into Tradables: Urban Form and Urban Function in A Developing City, *Journal of Urban Economics*,V.98, pp, 88-97.
- URL(3);<http://www.nzta.govt.nz/assets/projects/southernmotorway2-application/docs/assessment-environment-urban-form-function.pdf>,22.03.2017