MOBILITY AND THE ROLE OF PEDESTRIAN IN MAKING PUBLIC SPACE: MERSİN COASTAL PARK

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ABSTRACT

MOBILITY AND THE ROLE OF PEDESTRIAN IN MAKING PUBLIC SPACE: MERSİN COASTAL PARK

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Public space, being an inevitable component of cities, is an evolving space that transforms, expands or shrinks. Public spaces of cities, in general, constitute squares and streets that are open to the use of the whole society freely. Recreative areas, parks, coastal areas, most of the open spaces and public buildings, such as schools, administrative centres, are also other forms of public spaces. Over the last four decades, private or quasi-private public spaces, like shopping malls, and the privatization of public spaces have been discussed by scholars from different fields of social sciences, too. In any time, planning and designing of public space is a fundamental topic in urban planning and design literature. However, are all public spaces effectively accessed and used by everyone in terms of their ownership or inclusivity? Specifically, what are the roles of the pedestrians and their accessibility for making genuine public spaces?

This Ph.D. thesis focuses on the role of pedestrian movement and mobility in making public space in the fields of planning and urban design. It investigates the accessibility qualities of public urban spaces by proposing a model allows that comparative analysis of inner and outer factors of mobility and pedestrian behaviour. This model is a unique approach for public space in terms of pedestrian movement. Thus, it is possible to

spatially evaluate the potential and possibilities in making public space. As the case study, it examines the coastal park is one of the best examples in Mersin to discuss the role of pedestrian movement and mobility in terms of planning and urban design affecting making public space. The coastal park which has been transformed and evolved since the beginning of the 20th century by coastal the coastal park in the same context are efficiently used, some other zones could not be but is used or ignored by pedestrians. Therefore, this research shows how accessibility qualities affect public space-making and how the mobility capacity of pedestrians is crucial in creating genuine liveable and sustainable public spaces.

Keywords: Public space, Pedestrian behaviours, Mobility, Mersin, Coastal Park

ÖZ

KAMUSAL ALANIN OLUŞUMUNDA HAREKET VE YAYANIN ROLÜ: MERSİN KIYI PARKI

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Kentlerin kaçınılmaz bir bileşeni olan kamusal alanlar, dönüşen, genişleyen veya daralan, kısaca evrilen alanlardır. Genel olarak, tüm toplumun özgürce kullanımına açık meydanlar ve sokaklar, şehirlerin kamusal alanlarını oluşturur. Rekreasyon alanları, parklar, deniz kıyıları, açık alanların büyük bir bölümü, okullar, idari merkezler gibi kamu binaları diğer kamusal alanlardır. Son kırk yılda, alışveriş merkezleri gibi özel veya yarı özel kamusal alanların gelişimi ve kamusal alanların özelleştirilmesi, farklı sosyal bilimler alanlarından akademisyenler tarafından da tartışılmıştır. Herhangi bir zamanda, kamusal alanın planlanması ve tasarımı, kentsel planlama ve tasarım yazınında tartışılan ana konulardan biridir. Ancak, tüm kamusal alanlar, sahiplik veya kapsayıcılık açısından herkes tarafından etkin bir şekilde erişilebilir ve kullanılabilir midir? Özellikle yayanın 'erişilebilirliği' ve rolü, kamusal bir alan oluşturmak açısından nedir?

Bu doktora tezi, planlama ya da kentsel tasarım alanlarında kamusal alan oluşumunda yaya hareketi ve hareketliliğin rolüne odaklanmaktadır. Bir model önererek kamusal kentsel alanların erişilebilirlik özelliklerini araştırmaktadır. Geliştirilen model hareketin ve yaya davranışlarının iç ve dış etmenlerini karşılaştırmalı olarak irdelemeye olanak sağlamaktadır. Geliştirilen model kamusal alanın yaya hareketi bağlamında değerlendirilmesi için özgün bir yaklaşımdır. Bu sayede, mekânsal olarak kamusal alan oluşumuna ilişkin olanakların ve potansiyellerin değerlendirilmesi

mümkün olmuştur. Yaya hareketini ve erişim kapasitesini ve bu gelişimi etkileyen planlama ve kentsel tasarım faktörleri açısından incelemek için Mersin'in kıyı parkındaki kamusal mekân gelişimi önemli bir örnek oluşturmaktadır. Mersin kıyı parkı, 20. yüzyılın başından bu yana, şehir genişledikçe kıyı dolgu operasyonları ile dönüştürülmüş ve gelişmiştir. Bu park alanının bazı bölgeleri aynı bağlamda verimli bir şekilde kullanılarak üretilmiştir. Ancak, bu parkın bazı bölgeleri yayalar tarafından çok etkin kullanılırken, bazı bölgeleri ise kullanılamaz veya göz ardı edilmiş alanlardan oluşmaktadır. Sonuç olarak, bu araştırma erişilebilirlik özelliklerinin kamusal alan yapımını nasıl etkilediğini ve yayaların hareket kabiliyet kapasitesinin gerçek yaşanabilir ve sürdürülebilir kamusal alanlar yaratmada nasıl önemli olduğunu göstermektedir.

Anahtar Kelimeler: Kamusal alan, Yaya davranışları, Hareket, Mersin, Kıyı Parkı

[to my son, Can Belge]

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CHAPTER 1

INTRODUCTION

Public space is a term, which has been transformed, expanded, or shrunk. Primarily, public space would be evaluated as squares and streets those are belonged to the whole society and used by all citizens, mostly freely. In addition to these, recreative areas, parks, seaside or most of the open spaces or public buildings like schools, administrative centres, so could be evaluated as varying forms of public space. Recently, private public space like shopping malls is a discussion topic for social sciences, too. At any time, planning and designing of public space is a fundamental topic in literature. However, in terms of ownership or publicity, could all public spaces are efficiently accessed and used by everyone? ...that is an essential discussion. Notably, the role of pedestrian, which is the most basic model to use a public space, is critical to determine the identity of space in terms of accessibility.

In the study, instead of approaches, which see the pedestrian movement in public space is mostly discussed with space-syntax approaches or pedestrian is evaluated only as a mode of transportation with technical qualities, the study primarily focuses on quantitative attributes of public space, qualitative characteristics of public space base on human factor as a socio-spatial term are going to be investigated. Similarly, mobility management measures (Kristensen and Marshall, 1999) will include not only non-physical but also qualitative terms like design quality in public space that are going to investigate.

1.1 The Aim of Study

The study focuses on a critical perspective to the debates and discussions on public space and planning then focuses on the role of pedestrian and mobility in making public space. There are publicly owned areas in cities with different land-use, and open ones mostly have the potential to be used or defined as public space. However,

ownership is not the only parameter to determine a public space. In other words, publicly owned open spaces like parks, recreative areas, squares, or even streets could not be used effectively because of varying issues. On the other hand, some large open spaces in the same characteristics are not used in the same or similar frequency or users' profiles, or their rhythms would be changes in the same area. Therefore, the study aims to investigate qualitative characteristics of public space to develop an overall understanding of the role of pedestrian and mobility in the planning of urban public space.

The study affirms pedestrian not only as a mode of transportation in urban planning but also as a way to make places for themselves. Pedestrians can only be considered as a mode of transport or a healthier lifestyle. However, the pedestrian will constitute not only a mode of transportation but also the buried social character of the public space. The role of pedestrian and mobility in public openness, inclusiveness, and accessibility to the public space is not properly discussed. Complexity, ownership, access, minority interest, sharing, meeting, change and overlap, social life, activities, open space, universal etc. Public space and public space making features. Some are not critical to some public spaces in the heart of cities, such as the main streets or squares of cities. However, making public space as a planning and urban design problem underlines the critical role of people and their emergence as a pedestrian. Walking or being pedestrian is a critical tool to represent social life and society. Therefore, being pedestrian in the public space is a discussion with the criteria of mobility and pedestrian behaviour.

In relation with the case study, as a sub-aim, the study tries to observe the coastal area/waterfronts as a pedestrian and then propose means to improve as a public space by planning and design strategies.

In the defined context, what is the role of pedestrian and mobility in making public space (space to place progress)? is the main research question. The following sub-questions determine the structure and method of the study;

– What is public space, how could public space conceptualize as a socio-spatial term?
– How can be mobility and pedestrian movement measured in public space?
– What is pedestrian and pedestrian behaviour?

In the context of aforementioned questions, the study has the aim of developing a new assessment method in Planning and Urban Design. Therefore, the mobility studies and researches on pedestrian behaviour are brought together to evaluate inner and outer dimensions of them in the process of making public space. Consequently, the development method of assessment of the public open space in terms of mobility (accessibility) and pedestrian behaviour is the aim of the study.

1.2 Case Study, Mersin Coastal Park

Due to the limited public lands in Mersin, there has always been difficulties in acquiring public spaces. Especially with the planning decision, large green spaces would not be created. In order to overcome these issues, the development of coastal filling areas as recreation areas has been developed as a planning strategy. In defined context, first of all, the historical development of Mersin Coastal Park is studied in chronologically and spatially to understand the formation and development of case study area as a recreational public space and a pedestrian focus. Recently, the whole case study area is planned as recreational area in the current master and regional plans. In other words, case study area is determined as a public space according to legal terms and planning decisions. Therefore, case study area was designed as an open space with varying recreational facilities and landscape elements. However, there is no such a homogenous distribution of functions or users along the Coastal Park because of varying qualities or characteristics of public space.

In the spatial context of Mersin Coastal Park, recreation areas have a lot of designed space with varying elements like sculptures, figures, replicas of old or modern structures, or heroes from cartoons. On the other hand, although an ordinary and routine relationship between coastal and recreation activities has been designed, some areas on the beach may vary in terms of income, age, gender, and so on. While used

extensively by social groups with varying, there are some loose areas in the same context. The dissertation aims to present these varieties then evaluate that context to understand the role of pedestrian behaviour and mobility in making public space. Therefore, Mersin Coastal Park starting from Hilton Hotel at the east to Mezitli Stream at the west is selected as case study area.

Users' preferences in Mersin Coastal Park is evaluated by a local index that rank their expectations, needs and preferences for public space and to understand local pedestrian index for Mersin Coastal Park. Mobility and pedestrian behaviour in case study area are investigated in detail according to inner and outer variables and aspects indicating the characteristics of public space.

Case study research and field studies are supported by TÜBİTAK-1002 (The Scientific and Technological Research Council of Turkey - Short Term Research and Development Funding Program) including funds for questionnaires and field studies by students.

1.3 The Method of the Study

The method of thesis bases on a case study approach and includes two main parts as theoretical framework and case study. Theoretical research composes mobility and pedestrian behaviour in public space to determine key determinants and measures of them. In the second part, those variables are tested or discussed in case study area. The variables are studied as inner and outer dimensions of mobility and pedestrian behaviour.

Primary and secondary datasets are used in the study. Primary ones include fieldwork and observations, questionnaires and interviews, which requires time, human resources and financial support. As a critical aspect, data gathering stages of the thesis are supported by TÜBİTAK-1002 (The Scientific and Technological Research Council of Turkey - Short Term Research and Development Funding Program).

Field studies include extensive and intensive surveys to define the structural conditions of the site. Extensive research enables us to analyse the main landmarks

and spatial relationships with their functions, nodes, boundaries and domains. In addition, physical assets of land use and impact zone are monitored in detail. Intensive surveys are tools used to enrich detailed direct observations and documentation of the case area. In addition to the physical and natural context of the case area, it is necessary to evaluate the social space and the patterns of users to understand the public space. Therefore, user numbers are another important part of the method. User counts are made quantitatively and qualitatively. The number of users in a given period and in a predefined area provides only a quantitative assessment. However, the number of users with task areas or routines such as walking, jogging or fishing will be used to understand and identify patterns in the case area. Not only the number of pedestrians in an area, but the frequency of use, duration of use and reasons for use of the area may reveal whether an area has gained public space.

In addition to field studies, questionnaires are used to understand users' needs, expectations and their routines in case study are as pedestrians. Therefore, the questionnaire is designed including sub-parts to understand user profile, using pattern or routines in Mersin Coastal Park and the assessment of case area as a public space. Two sets of questionnaire were completed in case study area. First set compromise 1000 questionnaires that means %0,01 sample rate of the Metropolitan Population of Mersin were completed in Fall 2018. The second set of 2000 questionnaires, which is %0,02 sample rate of the Metropolitan Population of Mersin, were made in Summer 2019. Two sets of questionnaire in different seasons indicates varying user profiles and rhythms in case study are.

As a contribution to literature and planning studies, a local index is developed to understand dynamics and especially preferences of users in Mersin Coastal Park. Therefore, expectations or factors affecting pedestrian decisions to prefer a public space or varying places are evaluated. In addition to primary datasets, secondary sources obtained from the Municipalities and related institutions are used.

After data gathering, Geographical Information System (GIS) is used to analyse questionnaires, local index and field observations in spatial terms, then the Coastal

Park is going to evaluated in 3 sub-zones. The analyse base on the comparison of the characteristics of sub-zones in terms of variables of mobility and pedestrian behaviour. In addition to the comparison over the sub-zones, a comparison is made to follow routines and rhythms in in case study area with similar functions or not.

1.4 The Content of the Study

The study includes seven chapters based on the role of pedestrian and mobility in making public space. The first chapter, introduction, consists of aim, method, case study and general context of the dissertation. The following chapter, the literature review would be defined as pedestrian in public space. The study primarily underlines literature review on public space, mobility and pedestrian in urban planning.

The literature review focuses on public space, mobility and pedestrian as a term not only as a mode of transportation in urban planning but also as a way to make places for themselves. First of all, the terms of space and place are clarified. Then, public space as a term, its publicity or publicness and making public space are discussed and evaluated in detail. Especially, contemporary debates about public space focusing on ideal space in cities are discussed. In defined context, Gehl's (2010) categories for outdoor activities as necessary, optional and resultant (social) activities are critical for the study. Necessary activities include daily needs under all conditions like working, education or childcare. Optional activities including walking, looking, sitting or running bases on the desire of performers within appropriate time and place under good conditions. Social and cultural activities are made with other people. In any way, these varying outdoor activities differ according to outdoor quality and underlines that high quality in physical environment emphasize optional and social activities.

Making public space is another dimension of the dissertation because of its relation with planning and urban design to create better places for people. Carmona et al (2010: 57) emphasize this relation with four reason as; first urban design is for and about people, second urban design responds local and global context together, then urban designer should work in real world and challenge market, regulations and rules

together and finally it includes importance of design. These complex issues are summarized with sense of place as a keyword (Carmona et al., 2010: 96).

In defined context, especially changing understanding of public space and contemporary approaches are studied to get an overall frame for public space with its variables in terms of planning and urban design.

In the second part of literature review, the discussion evaluated on the quality of the public space is developed on pedestrian and their movement in the public space. In this context, studies on mobility and pedestrian behaviour are examined to evaluate pedestrian movement in public space and its publicness as a qualitative discussion. Therefore, in terms of planning, the quality of life and liveability are evaluated according to the role of movement of pedestrian and mobility. The aim of this part is to determine the variables on which pedestrian effect can be evaluated in making public space based on mobility and pedestrian behaviour.

Mobility is a term determining the movement of people or goods with quantitative measures within distances. According to general discussions, accessibility, impact zone, recreational facilities, services and amenities, are described as the indicators of mobility. Accessibility is a component defining a public space and related with physical dimensions of space. Impact zone would be seen as the relations, paths or connection between public space and its network or near environment. Public recreational facilities can be evaluated according to availability of facilities and their spatial distribution in public space.

Similarly, a set of variables are going to determine for pedestrian behaviour as safety, aesthetic quality, connectivity, comfort, attractiveness, personal characteristics and time. Physical and perceived safety are main needs and expectations of user according to (Maslow, 1954: 39-40). Aesthetic quality is discussed within satisfactions by values to not only the mathematician and to the scientist but also the craftsman, the artist and the philosopher. As another variable, the connectivity means continuous and well-maintained routes for pedestrians. Similarly, there are physical and environmental

aspects of comfort effecting pedestrian behaviour. In any way, attractiveness and convenience are determined as one of the main indicators for pedestrian behaviour.

According to literature review on pedestrian behaviour, cultural preferences have significant effects on use of public space within varying hours, days, months or seasons. In other words, time factor is crucial determinant of pedestrian mobility in public space.

After deep literature review, the details regarding the research method is provided in Chapter 3. In the context of dissertation, the method base on measuring pedestrian behaviour and mobility in public space. The variables derived from the literature are divided into two main groups as inner and outer aspects of mobility and pedestrian behaviour. Then, the comparison between sub-zones and similar functions are used to evaluate the role of pedestrian and mobility in making public space.

Historical development of the case study area and its formation and development as a recreational public space and a pedestrian focus is examined in Chapter 4. Then, spatial context of area is presented to introduce the context of site. In addition to spatial context, user's preferences in Mersin Coastal Park are introduced in this chapter to understand socio-spatial characteristics of case study area.

In Chapter 5, the details and results of study are presented and discussed within two main parts as mobility and pedestrian behaviour. In the first part, primarily, mobility in Mersin Coastal Park is evaluated by means of inner and outer components. Each factor discussed with its variables, then sub-zones of Mersin Coastal Park were compared with each other according to the results of questionnaires and qualitative investigations. After that, inner and outer aspects of pedestrian behaviour are studied in detail to understand characteristics of sub-zones. As result of those comparisons, Mersin

Chapter 6, includes the evaluation of results / findings of the dissertation. In defined context, two Coastal Park are evaluated as public space with varying character zones and their context. Comparisons are made as the comparison of sub-zones and

comparison of similar facilities or functions at the same time and evaluation of periodical or spatial context according to user counts. For example, sports facilities, the relation with sea (beaches, piers, platforms, decks), playgrounds and pergolas / green spaces are examined.

In Chapter 7, Conclusion, the summary of research and main findings are presented. Then, the contributions of dissertation are summarized from literature to planning strategies. In addition to the contributions, the limitations of the study, especially for field investigations, are enumerated as self-critic. Finally, possible further researches like comparison of different seaside of cities or repeating same research in Mersin Historic City Centre with earlier infill areas or different open spaces in residential neighbourhoods.

Finally, in the Appendix part, interview questions that are prepared for local index study and questionnaire forms are presented.

CHAPTER 2

PEDESTRIAN IN PUBLIC SPACE

What is the role of pedestrian and mobility in making public space? The chapter review focuses on this questions in terms of public space, mobility and pedestrian as a term not only as a mode of transportation in urban planning but also as a way to make places for themselves. First of all, the terms of space and place are clarified. Then, public space as a terms, its publicity or publicness and making public space are discussed and evaluated in detail. Especially changing understanding of public space and contemporary approaches are studied to get an overall frame for public space with its variables in terms of planning and urban design.

In the second part of literature review, the discussion evaluated on the quality of the public space is developed based on pedestrian and their movement in the public space. In this context, studies on mobility and pedestrian behaviour are examined. The aim of this part is to determine the variables on which pedestrian effect can be evaluated in making public space based on mobility and pedestrian behaviour.

2.1 Space or Place

Newton defines space as absolute space in a relation with absolute time, and space means something exists independently of objects. On the other hand, Leibniz determines space and time according to positions of things and events as relative terms (Jammer,1954).

Lefebvre (2014) similarly underlines that, if space is produced so it should be relative. Different authorities and ideologies reproduce space as a struggle area. Therefore, powerful groups will change, produce and recreate space according to their own benefits. Each society produce its own space according to biological or social reproductions. Urry (1985) analyse time and space in the context of social relation,

and instead of time consciousness, he emphasizes the significant role of space referring spatial distribution of labour force and spatial organization of civic society. Similarly, Harvey (1990) maintains relative space as a relation between things, but time exceed the limits of space by postmodernism. Foucault (2002) see relative space as heterogeneous, so overlapping relations. Simonsen (1996) summarizes social theory and space discourses in two main groups; space as material environment and space as differences. Material environment approach have developed within architectural discussions and traditional geography. The other approach sees space as social spatiality, practices and processes, so space is produced by different social contexts. Therefore, space and place become an agenda for socially determined spatial inequalities and struggles for power and resources (Tickamyer, 2000). Soja (1980) claims that organization of space as a social product is also related with urban spatial issues and class struggles, and then discusses "third space" to interlink different classes, gender and ethnicity.

Resuloğlu (2011: 29-31) underlines the differences between the words “space” and “place”, but discuss the concept of publicness defining a group of people, which have an identifiable characteristic. Place is mostly used to determine a location having social meanings.

Similarly, same definition could be used for space culturally defined or experienced environment (Lefebvre, 2014). Lefebvre (2014) states that, social space is a social product and information creates space. On the other hand, practice includes daily routines, representation of space focuses on maps, plan, design, and representational space compromises ideals, imaginations and so on.

Lefebvre as a high predictive social scientist (Tekeli, 2008: 19), says that if social relations of production are spatial, it could be really social which means that social relations are embedded to space while produced (Lefebvre 1991 cited in Tekeli, 2008: 19). Space is produced together with social. At that point, it is accepted that the spatial through social events cannot be excluded while spatial does not exclude social, too (Tekeli, 2008:19).

However, in any way, public space has a distinctive position through aforementioned discussion because of publicness. Public space is determined as institutionalization of space by society and the product of human relations and activities (Habermas, 2005). Actually, in legal terms, public space is open to everyone without any restrictions. Public space plays an important role by allowing interaction between people to determine the city's identity and character. In defined context, experience of being a citizen is obtained in public space by daily practices and social life (Sarıbay, 2000; Özbek, 2004)).

Carmona et al (2010: 38-39) underline that changing economic, social, cultural and obviously technological dynamics affect urban context more and more increasing scales. Development pressure in different scales by globalisation and internationalisation have caused standardisation of built environment and social activities, so homogeneous relations within urban environment, increased personal mobility base of mostly cars.

In today's world, globalization and different forms of economic and politic dynamics change recent geography into new spaces. New relationships are also emerged by produced new spaces. In defined context, specific features of local gain value by varieties of geographies and localities. These differences result in different spatial references and economic, social or political changes create transformation in spatial terms. The cycle changes and transforms the space by transforming and changing spatial economy, politics, social life and contributes. Therefore, public space as a term has been going to transform and evolve with recent discourse.

2.2 Public Space

In the antiquity, the market place, square or any word in any language exactly covers the word of Agora. In Greek City-States, agora was an area for free citizens to administratively or commercially determine their public needs. Dense and strict use of agora describe a primitive experience for public space (Wycherley, 1993: 45). Similarly, Carmona et al (2008: 23-42) evaluate public space through history,

especially Western public space from antiquity to Renaissance and Baroque until Modernism.

Akkar Ercan and Memlük (2015: 195-198) underline two groups of arguments on public space literature. The first one is determined as critical scholars like Sennett, Sorkin, Mitchell and Banerjee evaluating public space within the terms of publicness and inclusivity. They mention about privatization, commodification and commercialization of public space, which mostly crucial elements in urban restructuring. The second group Akkar (2005, 2007), Paddison and Sharp (2007), De Magalhaẽs (2010), Németh and Schmidt (2011), Carmona and Wunderlich (2012) and Langstraat and van Melik (2013) concentrate on "who", and public to determine forms, inclusive processes of production, management, local communities, civic rights and daily life routines. Contemporary debates about public space focus on ideal or inclusiveness of space in cities. Similarly, Madanipour (1996, 148) states that public space emphasizes open access to either space or the diversity of activities, most notably the social interaction, taking place in.

Public spaces within each neighbourhood, such as open spaces, streets and gathering places, are key factors to create liveable communities. Gehl (1995, cited in Montgomery 1998:110) claim that "the streets are undoubtedly the most important elements in a city's public realm, the network of spaces and corners where the public are free to go, to meet and gather, and simply to watch one another". In similar context, Marshall (2005:6) determines three physical roles of street as circulation route, public space and built form (Figure 2-1).

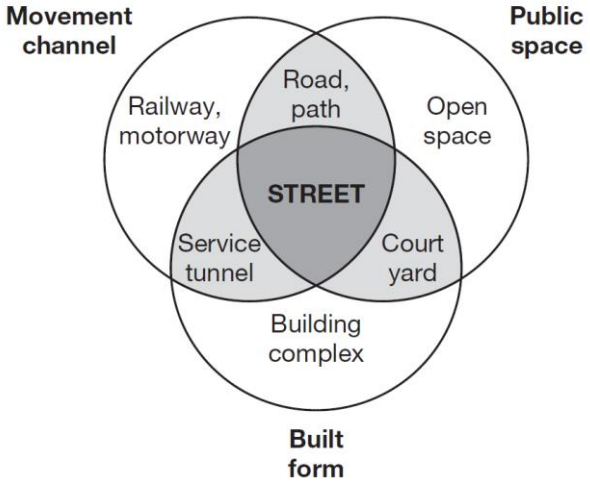


Figure 2.1. The elements of the street (Marshall, 2005: 6)

Carmona et al. (2008: 43) determine a bundle of critique of contemporary urban public space changing from physical decline to social discussions. Neglected space, lost spaces, 24-hour space, invaded space and exclusionary space are used as terms to underline physical dimension of public space in general terms. After that, privatization, manufacturing, consumption or segregation in public space are evaluated terms in current discourse. This approach lets to classify urban space according to nature and users. In addition to critiques, there is a discussion about the end of public space because of increasing private interactions, communications and policies (Carmona et al, 2010: 129). However, in any case, Bilsel (2009) points out that, nowadays, public space is everywhere with the introduction of mass media. In this case, the boundary between public space and private sphere is obscured.

Similarly, Urry (2011: 6-7) underlines that in modern world, life is hurried, which is determined as "harried" (Landed, 1970 cited in Urry, 2011) because of the rise of mobile society reshaping itself. Complex social, cultural and economic networks across the globe or at least certain nodes engenders the 'small world' experience and many people state that *"It's a small world, isn't it?"*. Nowadays, life is dynamic with different technological facilities like e-mail, SMS texting or internet telephonic services which let people to enlarge their relation out of pre-existing neighbourhoods.

In defined context, the discourse of public space is complicated than ownership or openness of public space. Therefore, following part of the study focuses on publicness or use of public space for people, citizens.

2.2.1 Publicness of Public Space

Gehl (2010) characterises outdoor activities into three categories as, necessary, optional and resultant (social) activities. Extensive research indicates that necessary activities are partially influenced by the quality of public space because of necessities for life to continue. On the other hands, optional ones are directly related with conditions are optimal or not. Moreover, perception of space is affected by liveability. People choose to stay long or not (Carmona et al., 2008: 11).

The quality discussion in public space could be described as publicness (Akkar, 2005) of a public space. In general terms, the term of "public" includes meanings of whole, open to all, accessible or shared by whole society (Gove, 1976 and Makins, 1998 cited in Akkar, 2005: 2). Therefore, its openness to whole society is crucial to define an area as public space. Akkar and Memlük (2015, 196-198) discuss accessibility of space as inclusivity and state that there are varying factors on the inclusivity of public space.

Akkar (2005) describes four dimension of accessibility to determine inclusivity of public space as physical access, social access, access to activities and access to information. Physical access is basically defined as universal access to physical environment (Tiesdell and Oc, 1998 cited in Akkar, 2015). Social access is related with who is and is not welcome in the space' (Carr et al, 1992, p. 149 cited in Akkar, 2015). Access to activities or uses and its variety let to mix social groups and inclusivity. Lastly, access to information, discussions and intercommunications is related with the management of public space for ongoing and future events and activities, as well as the design, planning, development, management, control and use processes on public space. These factors may be evaluated as physical and procedural dimensions to define public space (Akkar, 2005).

De Magalhães (2010, 562) summarizes different features of public space and publicness and defines publicness as collectively use of space for varying functional or symbolic purposes without the control of someone else or groups. De Magalhães (2010, 563) underlines different attitudes to publicness according to Madanipour (2003), Habermas (2001), Kohn (2004), Low and Smith (2006), Mitchell and Staeheli (2006), Watson (2006) and Worpole and Knox (2007) with the key terms of complexity, ownership, access, minority interest, sharing, meeting, exchange and overlapping. After that, De Magalhães (2010: 563) determines that the right to access including rules and mechanisms lets ease of movement, the right to use defining rules and codes for individuals enjoying public space's attributes and the right to control and ownership, not only meaning public ownership but also variety of stakes.

At that point, Carmona et al. (2010: 109) emphasizes the terms of public realm that relates and overlap with public life in terms of urban design. Loukaitou-Sideris and Banerjee (1998: 175 cited in Carmona et al., 2010: 109) underline differences between private and public life as public life is open and universal in social context instead of limited boundaries of private life. This means that public realm with space and its setting lets public life so social interaction. Arendt (1958, cited in Carmona et al., 2010: 109) points out political dimensions of public realm starting from "Greek Polis" as a self-governing entity to modern public space lets debate and solve struggles. However, public space and social life have a reciprocal relationship which means that changing dynamics in public life would require changes in space (Carr et al, 1992, 343 cited in Carmona et al 2010: 109).

In defined terms, streets, parks and obviously squares are external public spaces including different activities together on publicly owned lands. In addition, there are public buildings like libraries, museums or cultural centres which are defined as internal public spaces. On the other hand, contemporary cities include privately owned external public spaces like university campuses or sport areas and internal like shopping malls or gastronomic facilities named as quasi- public spaces or pseudo public space (Carmona et al 2010: 111). However, in any way, while some spaces have been gradually evolved as public space, making public space, designing and

creating public space as meeting place of public is a crucial issue in planning discussion.

2.2.2 Making Public Space

Lang (1994) expresses four features of environment as terrestrial meaning earth, animate including living organisms, social indicating relations, and cultural including behavioural norms and artefacts created by society. Each urban environment is unique in local context including particular natural context inhabited by varying communities with multi-layered social relations, so distinctive local culture. Therefore, place-space is not only a physical sense but also people, who create, use and occupy, are so crucial. The relationship between culture and environment is two-way interaction, people create or shape physical environment according to social and cultural needs, then physical environment affects social and cultural context. In aforementioned relation, designing or making space is complex issue for planning and urban design (Carmona et al., 2010: 38).

Making public space is not possible without planning or urban design that is crucial for creating better places for people. Carmona et al. (2010: 57) point out four reason for this relation as; first urban design is for and about people involving considerations of equity, gender, income, etc. Then, urban design responds local and global context together. Third, urban designer should work in real world and challenge market and regulations together and finally, urban design includes importance of design as a whole. For this complex issue, sense of place is keyword (Carmona et al, 2010: 96). Bosselmann (2008: 181) emphasizes sense of place as place attachment, dependency and identification with place in natural and constructed settings in a relation with sense of time and sense of community. In any way, place, so sense of place, has three dimensions as activity, physical setting and meaning (Figure 2.2).

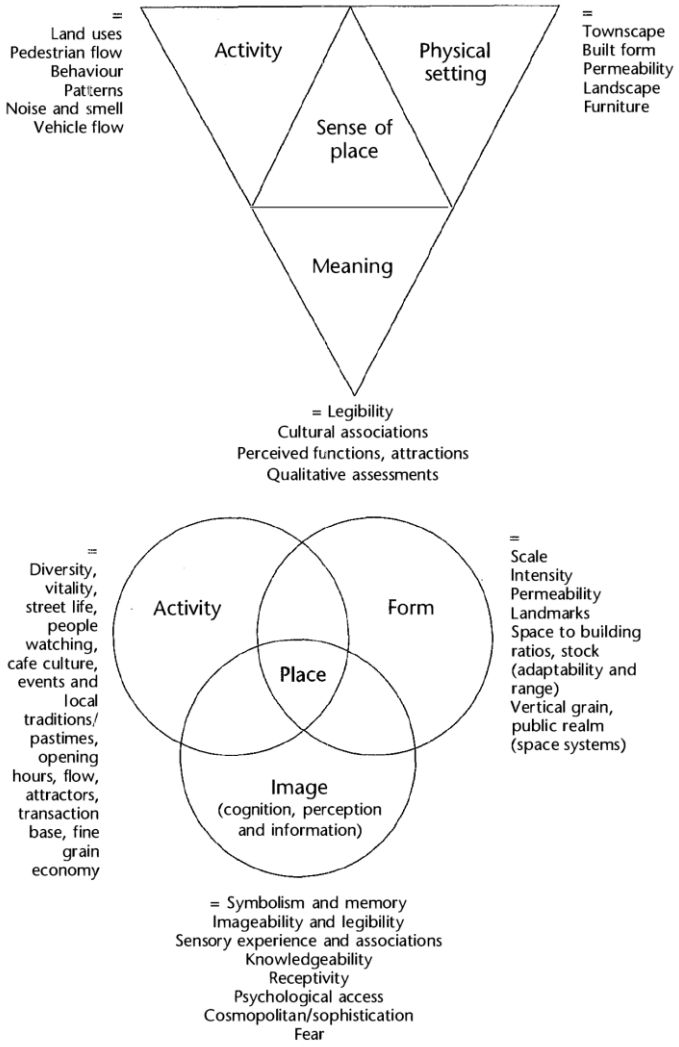


Figure 2.2. The components of sense of place and place (Punter, 1991 and Montgomery, 1998 cited in Carmona et al., 2010: 99)

According to those relations between social structures, cultures and natural or physical environment, comfort and image, access and linkage, uses, activity, and sociability are determined as attributes of successful places with intangible factors or key measures. Actually, there is a direct relation with urban design and the concept of place in terms of character-identity, continuity and enclosure, quality of public realm, ease of movement, legibility, adaptability and diversity (Carmona et al, 2010: 9).

As part of the 'making places' tradition, according to Lynch (1981: 118-119 cited in Carmona et al, 2010, 9), vitality, sense, fit, access, and control are five performance dimensions of urban design, so good place. Similarly, Jacobs and Appleyard (1987: 115-16 cited in Carmona et al., 2010: 9) listed liveability, identity, access, authenticity or meaning, public life, urban self-reliance and an environment for all as goals of making spaces.

Gehl (2010: 19) expressed that walking as a platform and framework between people who share public space is the beginning or the starting point for making space. Gehl (2010) criticized that pedestrian movement is not only a mode of transportation, walking is way to set relation between people and nature.

Gehl (2010) determines open-area activities in three main groups. First group is called ‘necessary activities’ which include walking, dining, waiting or shopping for daily needs under all conditions like working, education or childcare. Second group of activities are ‘optional activities’, including walking, looking, sitting or running. Second group of activities take place through the desire of activity performers within appropriate time and place under good conditions. Last group is basically defined as ‘social and cultural activities’ which require the presence of other people. These outdoor activities compromise varying modes and relations with surrounding environment, but basically could be evaluated as public space. Gehl (2010, 21) sets a direct relation between outdoor activities and outdoor quality, and he underlines that high quality in physical environment boost to optional and social activities (Figure 2.3).

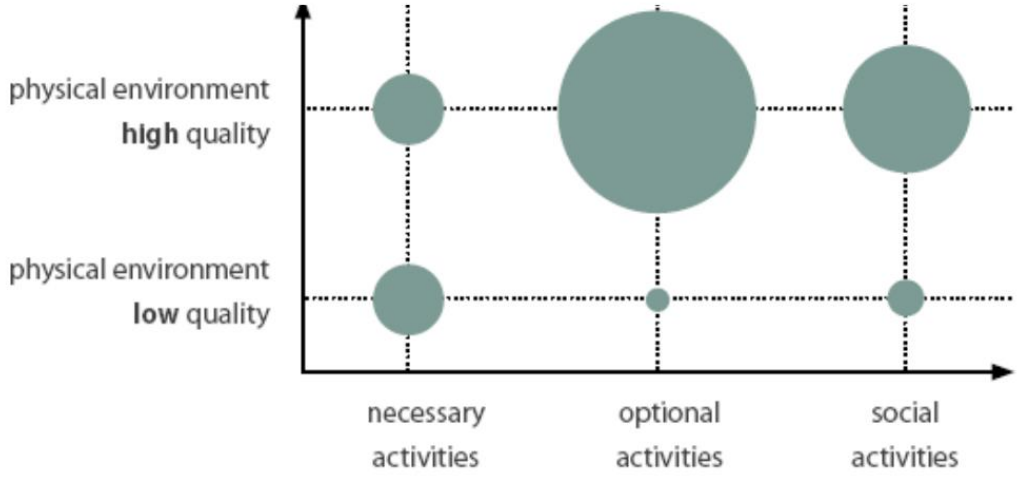


Figure 2.3. Graphic representation of the connection between outdoor quality and outdoor activities (Gehl, 2010: 21).

As another detailed approach, Whyte (1980) lists main components and characteristic of urban public space with detailed quantitative standards. There are standards or minimum number of trees, also planting, to enrich urban plaza to be evaluate as a public space. Of course, numbers or standards should be revised according to social structure, needs, preferences or seasonal factors. Similarly, the width of sidewalks along streets and their capacity to be used as a public space is essential. Vertical circulation elements like building lobbies and interesting or attractive functions like libraries, museums, and art galleries shall be permitted to make public space in urban open space or near arcades. Furthermore, urban open spaces would be safe by illuminating throughout with an overall minimum average level. For circulation and access, which includes unimpeded movement too, the number, height and facades of buildings, their settings and relation with space and use of paths with ramps are important. Furthermore, facilities, especially gastronomic facilities would revitalize urban plazas, but there should be some permissions and obstructions related with sidewalk widening and openings. In permitted areas, features and equipment like fountains and reflecting pools, waterfalls, sculptures and other works of art or benches, seats, trees, planting beds, litter receptacles, drinking fountains, and bicycle racks,

open air cafes, street furniture, lights or temporary exhibitions will enrich public space (Whyte, 1980: 113-114).

Similarly, Liu (2016) summarizes the components of successful public space as safety, cleanliness, legibility, permeability, visual enjoyment, flexibility, friendliness to daily uses, sense of ownership and cultural identity.

Shortell (2016: 7) emphasizes essential role of walking to read urban space, because slower pace sufficiently allows intake data. Furthermore, people could pay attention to traces or signs of characteristics of area while walking, more than other forms of mobility, such as biking or car riding. Actually, studies focusing urban walking are based on the term of "flâneur" theorized by Benjamin (1995). Flâneur has no interest or purpose. All s/he wants to do is to walk and to make sense of what s/he sees around or walk to read the city.

All matters of street and public space are actually related with urban management and governance. Urban governance coordinates public space by means of urban design, and Sellers (2003: 47) evaluates this process within street. There are different authorities or stakeholders, who has varying roles like infrastructure in the street, where there is lack of holistic vision. Although public authorities have different strategies on walking, cycling, parking, signing, traffic calming, etc., they usually fail to coordinate or to have holistic management. In fact, authorities should respond challenges and needs of planning and transportation together. In defined context, the European Foundation for Quality Management (EFQM) developed a model to form the basis of the Street Excellence Model (SEM) including public realm strategy, which emphasizes various policies and strategies for local authorities (Sellers, 2003: 631-633)

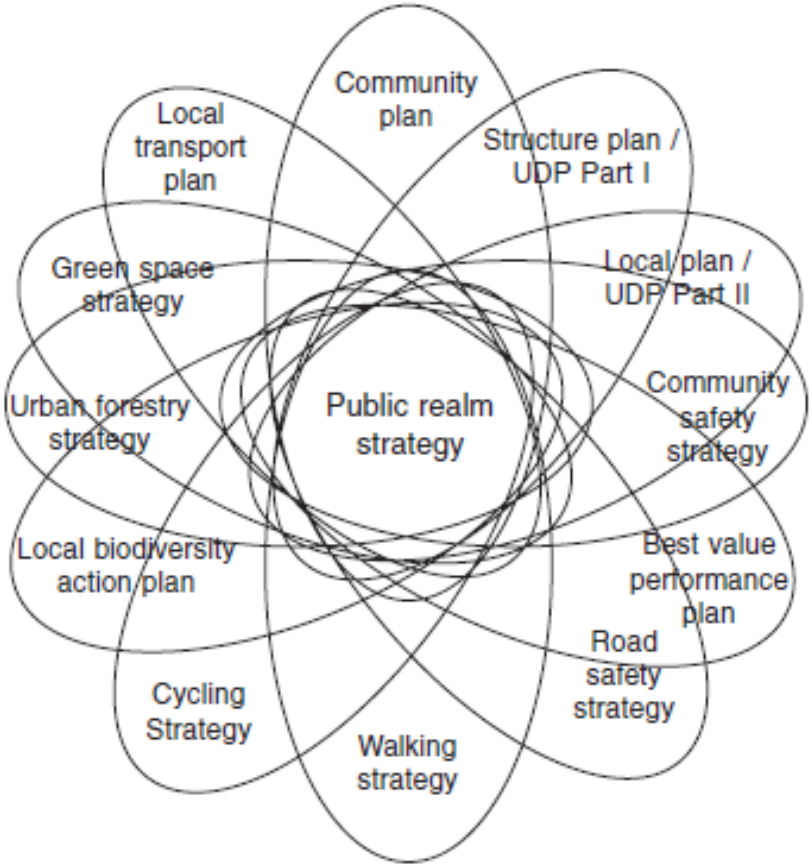


Figure 2.4. Public Realm Strategies coordinating varying plans and strategies (Seller et al, 2003, 633 cited in Sellers et al., 2003: 47).

In defined context, strategies for public space / realm have to focus on people, their activities, their relation with public space, and how they are interacting with public space and interfacing with their homes, works or other daily activities. Crucial basis is walking like a filling material between them. Evaluating people's needs at the heart of any public realm strategy will bring many other issues, alongside such as safety, access to public transport, traffic flow, parking, facilities, social and cultural activities, landscape, and of course, unimpeded movement (Sellers et al., 2003: 47).

Webber (1963 cited in Barlas and Şentürk, 2011: 110) suggests that new communication technologies would determine the future of society; may be sophisticated and harmonious community by increasing interactions and the flow of

information. In this society, social interactions would not require space or place. On the other hand, Goffman (1963, 1967, 1971 cited in Barlas and Şentürk, 2011: 110) emphasizes that public spaces are essential to build a community. It is different than traditional understanding, but the term of public space has been evolved. Barlas and Şentürk (2011: 111) define urban identity base on cognition the components of the urban fabric (legibility) and whole of visual images (imageability), then experience and share space, especially public space with others, let to place making, consensus and thus the urban identity. How urban identity could be manifested for individual or societies? For this purpose, cognitive mapping can be considered as a relevant tool to provide a general conceptualization of reflecting a certain type of meaning attached to the environment. Although cognitive maps are only physical images, they are more than simple physical reflections of the environment. Thus, any cognitive map showing components in a certain unity could be thought as a well-developed cognitive map because of reflecting a solid urban identity. If the components do not exhibit any formal organization linking one component to another, or if only part of the environment is clearly legible, this can only be considered as a fragmented or partial cognitive map (Barlas and Şentürk, 2011: 111-2).

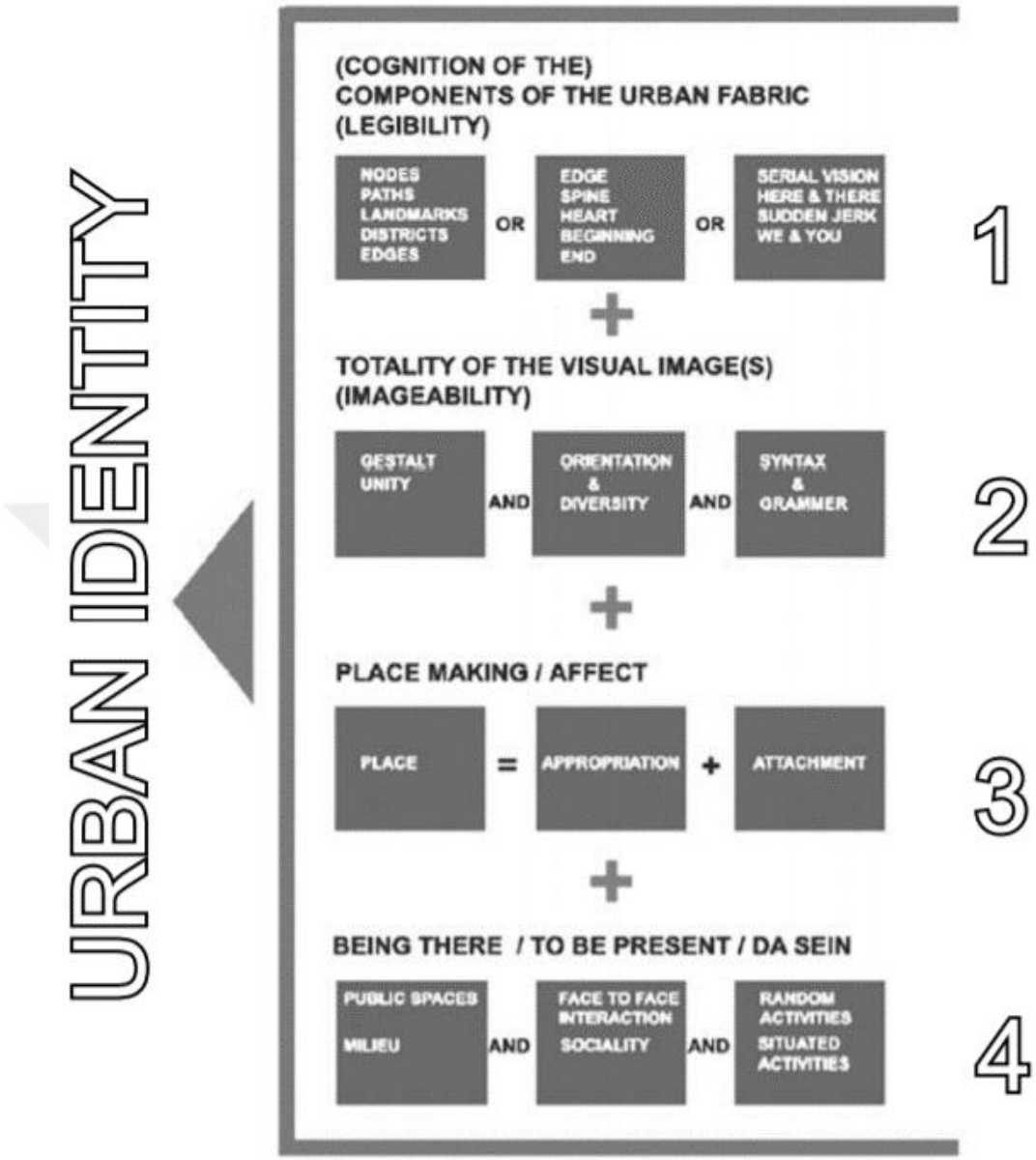


Figure 2.5. Components of urban identity (Barlas and Şentürk, 2011: 111)

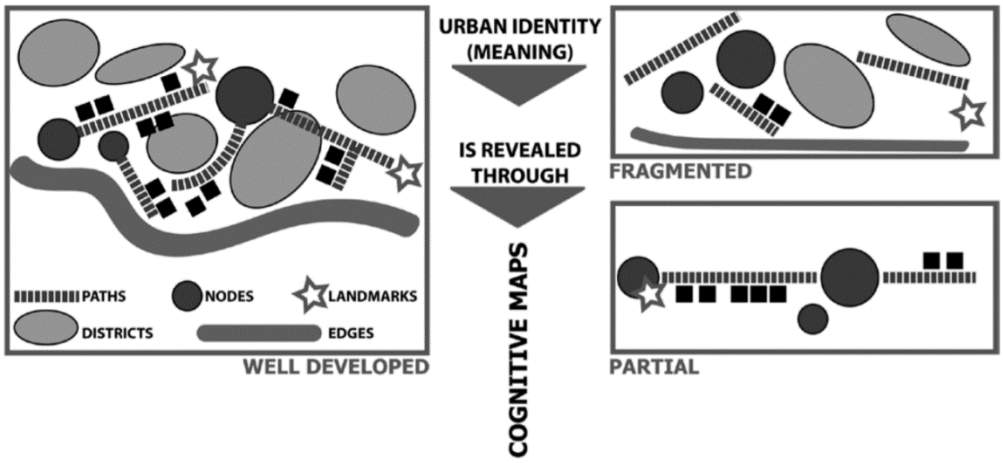


Figure 2.6. Schematic representation of cognitive Maps (Barlas and Şentürk, 2011: 112)

In sum, in addition to physical characteristics, space is the area for both productions of social and including social. Human perceives space and experiences it, and there is an interaction between human and space as the routine of daily life. In the planning literature, the discussions on public space and space-place are changed and transformed in relation with embedded social and spatial features. In defined context, pedestrian could not be evaluated only as a mode of transportation or a way of healthier life. However, Pedestrian is not only a transportation mode, but also embedded social feature of public space, which would form public space.

The role of pedestrian and mobility in publicness, inclusivity and accessibility of public space is not properly discussed. Complexity, ownership, access, minority interest, sharing, meeting, exchange and overlapping, social life, activities, open space, universal and so on are features of public space and making public space. Some of them are not critical for some evolved public space at the heart of cities like squares or main alleys of cities. However, making public space as a planning and urban design issue underlines a critical role of people and its emergence in place as a pedestrian. Walking is a critical tool to involve in social life and representation in community. Therefore, being pedestrian in public space is a discussion with measures of mobility and pedestrian behaviours.

2.3 Pedestrian Movement in Public Space

The publicness of public space is a qualitative discussion. Therefore, in terms of planning, the quality of life and liveability should be evaluated according to the role of movement of pedestrian and mobility.

In the HABITAT II Turkish National Report and Action Plan (1996), sustainability, liveability and justice were selected as the basic principles for human habitats, while civic engagement, enablement and governance were selected as the instrumental principles. In the Report, sustainability is defined as a condition that should be performed. Liveable habitation, at the same time, should be sustainable, fair and equitable. In the Report, liveability is defined as a term, which is related to not only individual and social well-being, happiness, but also spatial characteristics and qualities of human settlements that directly contribute to the satisfaction of people living in a settlement. All these terms are closely related with human rights. Especially liveability is the spatial dimension of human rights.

In the agenda of HABITAT II (1996), the concept of liveability is used to refer to the quality of life (QoL) which is closely related to the spatial and physical features of our living environment, as well as social and economic factors. This term directly affects the organization of land-use pattern, building and population densities in urban space, architectural style, the accessibility of public spaces. This section aims to explore the notions of 'quality of life' and 'liveability' as the key components of sustainable urban development. After setting up a relationship between walkability and these terms, the concept of walkability and a set of criteria to measure the walkability capacity of urban environment will be explained in detail.

A renewed focus on health, well-being and quality of life in cities means that we are rediscovering the benefits of traditional active travel modes such as walking and cycling as different modes or models in mobility. (Rode et Al., 2015: 6)

Quality of Life is related to human basic needs. The spatial quality of life is important in terms of generating identity of space and sustaining memory of the place. In the literature, two distinctive types of urban QoL indicators are recognized;

- **objective indicators** that measure concrete aspects of the built environment, the natural environment, economy and social domain,
- **subjective indicators** that are connected to the individual's evaluation of objective conditions of life

Human actions, being contemporary view of QoL in planning, can modify spatial QoL. Therefore, the spatial QoL can be **controlled, adjusted and enhanced** by individuals through the use and management of these objective and subjective indicators.

In terms of planning, urban design is crucial for the production of public space. Carmona (et al., 2008: 6-9) mentions three approaches in urban design: Firstly "visual-artistic tradition" focusing visual qualities of buildings and space, secondly "social usage tradition" concentrating social qualities of places and activities, and lastly, "making place tradition" synthesis these two approaches, which focuses on design of urban space as aesthetic and behavioural - social value? Socio-spatial approach also relates with the management and planning of urban space. Planning of public space includes coordination, regulation, maintenance and investment-financial dimension in varying scales.

Walkable environment is a place which is a safe, secure and convenient to travel by foot (Krambeck and Shah, 2006). Walkability is regarded as the quality of pedestrian facilities, street patterns, sidewalks, roadway condition, built environment and especially urban design characters. Hutabarat (2009:145) claims that the definition of pedestrian and the development of pedestrian space have importance to understand the walkability discourse.

The Oxford Dictionary[1] defines pedestrian as "a person walking rather than travelling in a vehicle". Therefore, the walking activity is regarded as a mode of transport. Likewise, walking is an activity, which keeps public spaces alive, dynamic and colourful. Forsyth and Southworth (2008: 1) indicate crucial role of pedestrian experience in street as *"...In ignoring the pedestrian experience, the street lost its intimate scale and transparency, and became a mere service road, devoid of public life."*

Walkability quality of urban environment can be measurable. There might be a number of qualitative and quantitative measures to assess walkability capacity. Safety, orientation, comfort, diversity, attractiveness, destinations and street pattern are some of these qualities (Figure 2.7), which will be explained in detail in the following section of this chapter, and used as a set of measures for the walkability assessment of the case study.

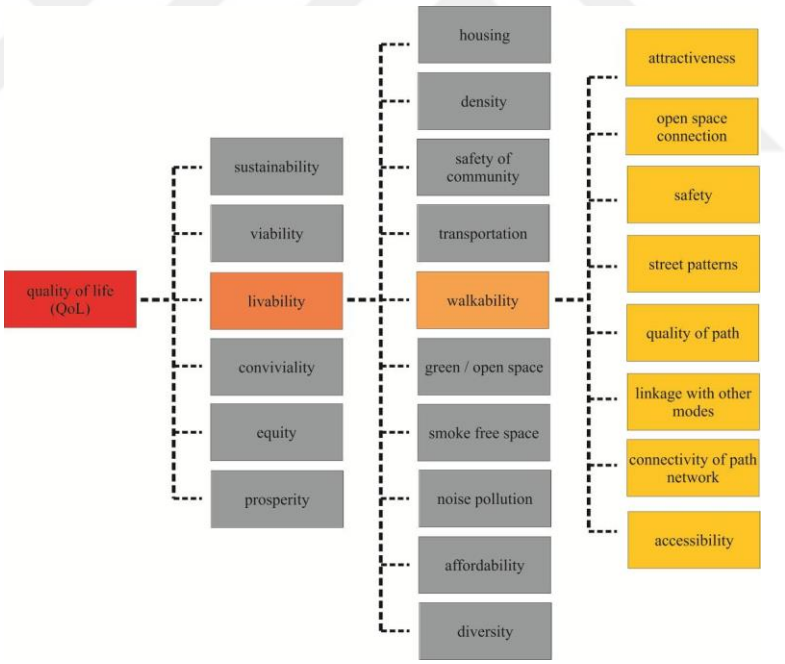


Figure 2.7. The evaluation of Quality of Life in terms of Walkability Adapted from, Hancock, T., et al. 1999, Hutabarat L.R., 2009, Lambert K, 2005 and Southworth, M., 2005 by Belge, 2012)

[1] (http://oxforddictionaries.com/definition/pedestrian)

In addition to increasing role of mobility especially active modes as pedestrian or cycle, there are discussions for “danger” bases of unauthorized uses of everyday mobility. While some local authorities promote everyday mobility, some authorities would see walking as a part of urban crime or collective social / political movement. Walking is a form of agency for social activities. Everyday mobility is a component of traditional or local urban landscape with local citizens. Moreover, local politicians, workers, tourists, flâneurs or whole social actors use or occupy urban streets as an essential routine of their social / daily life as a ubiquitous part of urban life and culture (Shortell and Brown 2014: 1 cited in Shortell, 2016: 2).

In any way, almost all trips involve walking through the journey including different stages, like a very short walk to and from public transport or a car park. In fact, walking is an integral element of all travels, so walking has a role like a glue gathering the transport system together. Moreover, with 35 % of car journeys being less than 2 miles in distance, so walking will be an alternative for car use in short distances. On the other hand, there are some factors decreasing or affecting walking, such as damaged or disrupted footways, mass traffic flows or weather conditions as a significant deterrent to walking and a reason for driving. Therefore, some structural measures like design of buildings or shelters should be provided to promote walking (Goodman and Tolley, 2003: 72). Hillman (1990 cited in Goodman and Tolley, 2003: 72) points out distance as one of the primary deterrents to walking similar to time factor. Another primary factor is personal safety or fear of crime those are formed by physical or social determinants like dark-isolated locations, gender or hours, which are important in whether people would consider walking (Goodman, 2001 cited in Goodman and Tolley, 2003: 72).

Gehl and Gemzøe (2003: 106) emphasize that; current public life is not an update of an older tradition, but exactly a new phenomenon with changing dynamics in urban area and traffic, noise, pollution and so on. Daily life has been developed in homes with computer, in cars or other similar context. In any way, the opportunity to interact with others in public spaces is still extremely attractive. However, the information society develops new meaning and significance to the city as a public space.

In a similar context, a person walking in the city determines his/her route in the public space, and owns this place while experiencing closely the city space. Pedestrians who experience the city on foot contribute to the revival of urban spaces and to the diversification of urban activities, trade and other functions. In other words, the action of walking in the city is a key aspect of urbanity and urban life in a sense (Bilsel et al., 2016: 13-14)

In contemporary public space discussions, pedestrian oriented planning and design are seen as essential components of place making. New mobility is one of the dimensions of place making with innovations in connectivity, automation and digital technologies. In any way, there is a direct relation between pedestrian environment and place making. Consequently, the components and variables of two essential feature of public space, are mobility and pedestrian behaviour.

2.4 Mobility

Mobility is usually defined as the movement of people or goods, so it bases on number of persons or quantities of goods and distance. Therefore, increasing numbers and speed are benefits of societies according to this perspective (Litman, 2011, 4). Marshall (1999) underlines paradox on reducing mobility while maintain accessibility in the discourse of public space and planning. Marshall (2005: 50) mention *a conventional hierarchy* between 'mobility' and 'access' that are appear together in a single, inverse relationship (Figure 2.8).

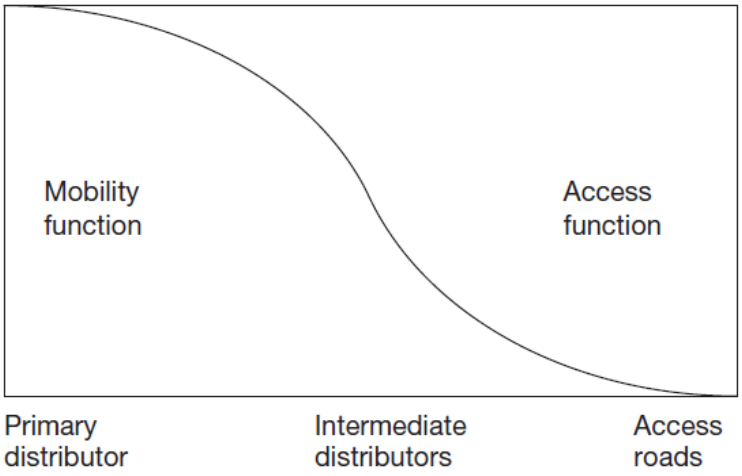


Figure 2.8. The classic inverse relationship between mobility and access (Marshall, 2005, 50)

Actually, there is a terminological conflict because of transportation modes. In terms of making public space, there is a direct relation with being pedestrian so mobility should be evaluated not only as accessing somewhere else, but also as ease of movement in somewhere else. Mobility is defined as "the ability to move between different levels in society or employment" in the Oxford Dictionary[2] For that reason mobility regarded as an ability of movement. Providing mobility is related to the accessibility. Actually, Divall (2011: 307) points out people's attitudes to construct a past involving writing cultural histories of mobility for understanding attitudes towards mobility have changed and also stayed the same, while our attachment to cars might only date near past.

Shortell (2016: 1) maintains that walking is older than urban settlements and has been a significant form of urban mobility. Moreover, walking is not only related with movement, but also a social activity by urbanization, so it is emphasized as a fundamental issue for liberty of labour in cities from feudal society to modern one. Modern citizens have right to move at will within the boundaries of the nation states. Actually, walking has varying meanings for different groups according to their

[2] (http://www.oxforddictionaries.com/definition/english/mobility

motives and means. While high-income groups reflect mobility as a lifestyle choice (Bauman, 1998: 86 cited in Shortell, 2016: 3), mobility is often forced and is sometimes seen as running away from something or toward something better for low-income or powerless ones. In any case, spatial mobility as a phenomenon circuits around four main forms; migration, residential mobility, travel, and daily mobility (Kaufmann, 2002: 40 cited in Shortell, 2016: 4). These forms are described according to two dimensions, duration and relation to the living area. Short duration movements within the living area are daily mobility, and those outside the living area with long durations are travel (Shortell, 2016: 4).

Urry (2011: 4-5) underlines significance of movement in the contemporary world with its representation through popular media, politics and public sphere as ideology of twenty-first century. Then, five possible types of mobility, which are producing social life within varying distance and forms, are determined as:

- Physical travel of people for work, leisure, etc. within different time-space patterns like daily, annually or once in a lifetime,
- Movement of objects or goods to different actors like producers or consumers,
- Imaginative travel effected through images of place or people emerged by visual documents and media
- Virtual travel or communication in real time transcending geographical and social distance,
- Communicative travel by messages by varying tools such as postcards, letters, telephone or mobile (Urry, 2011: 4-5).

Urban mobility in most cities of the developed world is changing as a result of technological innovation, socio economic change, *new policy interventions* (Rode et al, 2015: 6) and changing perception of people. In small cities, the primary role of transit is to provide mobility to the transportation-disadvantaged. This is a matter of equity more than efficiency. It reflects the view that travel is essential to human beings and that all citizens are entitled to some form of transportation service, regardless of their circumstances (Black, 1995: 20).

Marshall (1999) underlines those indicators for mobility should change case by case according to parking, roads, public transport, walking and cycling policies those effecting travel patterns.

Based on a special research for green spaces, Van Herzele and Wiedemann (2003) emphasizes the importance of distance from home to green space, and distance is matter according to size of green space. The research bases on accessibility of green spaces according to functional levels and green space qualities and Van Herzele and Wiedemann (2003) use GIS model to provide a monitoring tool by visualising main features. There are similar researches using technological facilities to follow people's daily routines for evaluating distance and gathering points (Urban Mobility Report, 2011).

In addition to new technological facilities like GIS or blue-tooth devices, Evans (2015) uses traditional methods like small focus group meetings, postal questionnaire surveys; accompanied map walks organised with to understand perception of environment and their relation with routes.

As another point of view, Kallerman (2016) applies a qualitative analysis based on plan descriptions predetermined as mobility, green space and safety. Kallerman (2016) defines mobility according to links between areas, road systems, and estimations of traffic flows, public transport and separation of different modes of transportation.

However, in any way, Civitas (Cleaner and better transport in cities)[3] defines a series of indicators for public transport and its features like cost or quality, accessibility to key destinations, density (land-use), active travel patterns, cycling networks, traffic calming or pedestrian oriented movement and parking policies. In addition to the indicators of mobility, the initiative suggests the indicators of outcomes like

[3] Civitas is an initiative financed by EU, (http://www.civitas.eu/sites/default/files/documents/rye_session_8_civ_forum_2015_capital_ag5_v3.pdf)

satisfaction, time-distance pattern, public transport reliability, car ownership and also serious impacts life emissions and noise.

According to general discussions, accessibility, impact zone, recreational facilities, and services and amenities are indicators of mobility. In the following sessions, definitions and measures of indicators are discussed in details.

2.4.1 Accessibility

Accessibility is an essential component defining a public space and related with physical dimensions of space (Lotfi and Koohsari, 2009: 419). Jacobs (1995: 302) determines accessibility as a matter of public access to places. Lynch (1953, cited in Banerjee and Southworth, 1995: 68) underlines low cost of movement and relation with activities as dimensions of the accessibility.

Mateo-Babiano (2016: 114) emphasizes that pedestrian friendly environment has to provide equal access to all functions and users. In fact, the presence of varying groups would contribute street liveliness. Therefore, Jacobs (1961 and Gans 2002 cited in Mateo-Babiano, 2016: 2-3) use of sidewalks and streets should be underlined as spaces, like for various purposes such as to communicate, shop and eat.

Whyte (1980: 65) emphasizes that public space must be accessible to public at all times. In that definition, accessible means that public could use the space in the same manner as it did any public space, with the same freedoms and the same constraints.

Accessibility usually refers to the ability to reach desired goods, services, activities and destinations, so it includes mobility (people's ability to travel) and land use patterns (the location of activities) together. However, measuring accessibility is a hard issue because of land-use, mobility and different modes. Mobility is usually measured by using travel surveys with quantities like number of person or tons per miles and travel speed defining time factor (Litman, 2011: 5). Measuring vehicle traffic is easier than pedestrian movement because of different types or alternatives of pedestrian behaviour just accessing or different means (Litman, 2011, 16). In similar perspective, land use or functions are as crucial / critical as mobility in the quality of

transportation means different types of accessibility. The distribution of functions directly affects efficiency of transportation systems. Therefore, the best location for public facilities would include combination of proximity, access, service and walkability. Land use accessibility is determined by density, mix-use, non-motorized conditions and network. Access will vary according to different geographic scales. At a fine-grained scale, the quality of the pedestrian conditions and facilities have significant effects. At the neighbourhood level, the quality of sidewalks and cycling facilities, street connectivity and geographic density are effective. On the other hand, in general scales, regional or interregional scales, accessibility has direct relation with street connectivity, transit service, geographic density or the quality of highways, air service, bus and train services (Litman, 2011: 6-7).

Lyons (2011: 160) makes an overview of the determinants and consequences of the transport systems based on demand to travel affected by land use, and he underlines the relation between capacity and traffic congestion, which has always adverse effects on time, economy and emission. On the other hand, people have to travel to set relation with other people or goods, services and opportunities in a distance. By time, technological developments will enhance or ease both mobility and traffic management (Figure 2.9).

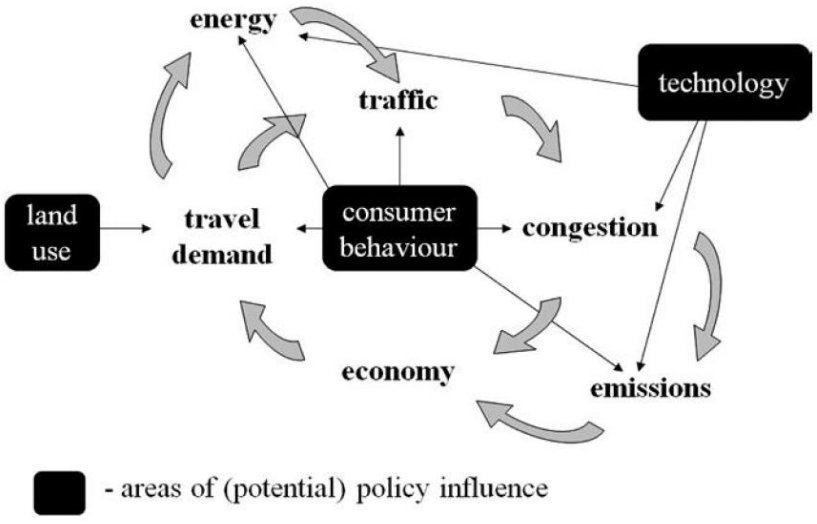


Figure 2.9. Determinants and consequences of the transport system (Lyons, 2011: 160)

Duany et al (2010: 3.7) say that transportation planning has to evolve from focusing on auto mobility to variety of mobility. However, key term should be accessibility with the minimum amount of travel and cost instead mobility. In fact, self-sufficient zones make mobility less important. Once again, transportation problems often have land use solutions. When communities satisfy their needs for goods and services nearby, self-sufficient local economies develop.

In fact, ease of movement / travelling is a key issue for accessibility of space. The streets provide connection from one place to another one with different segments for vehicles or pedestrians. Moreover, those links / connections mean movement of goods and services within streets (Moughtin and Mertens, 2003: 131). Consequently, access to public transport, parking, orientation and unimpeded movement are the components of accessibility

Accessibility of different public transport modes like bus or railway is one of the most essential variables of accessibility. Not only lines or routes of public transport, but also mainly the locations of stops and walking distance to them determine accessibility of public spaces. Southworth (2005: 251) states that stops or stations should be frequently located to let pedestrian access to different facilities, services and functions within 10-20-minute walk. The visibility of stops and the amenities of them like shelters to be protected from different weather conditions are effective on pedestrian's preferences, which is also linked to safety and continuity of paths.

Parking is another component of accessibility and has a dominant character on the street. Jacobs (1995: 305) underlines people with vehicles would like to park as close as possible to their destinations. However, parking and service zone would cause discontinuity on pedestrian movement along streets or public space (Crankshaw, 2009: 75). Therefore, managing parking with appropriate planning and design tools could efficiently control continuity of pedestrian movement. There are different aspects like parking zones, dropped curbs, consolidating entrances and continuing walkways across entrances would provide better accessibility (Crankshaw, 2009: 75). Moreover, parked cars create a barrier between pedestrian and vehicular movement.

However, in any way, street parking should be controlled to avoid from pressure on pedestrian's movement.

As another component of accessibility, orientation includes variety of factors. Lynch (1953, cited in Banerjee and Southworth, 1995: 135-137) defines orientation according to the sense of clear relation of citizen within the city, and then he sorts directed lines, sequence, landmarks and special spaces as factors affecting orientation. Moreover, natural factors like topography or seaside and morphological characteristics like grid pattern would affect orientation in cities. In addition to aforementioned aspects, Moughtin et al. (1999: 14) point out the symbolic dimension of public space including signs, information boards or even decorative lines, landmarks or facades, which have essential role on orientation. In fact, orientation as a matter of accessibility has effected by legibility and permeability of space. Legibility is the ability to read / understand the space easily. Permeability enables short and direct route choices for pedestrians, so that legible street pattern provides permeability (Bendey et al., 1985: 12, cited in Kolody, 2002: 4-5).

As a matter of fact, people must be able to move on the street with ease (Jacobs, 1995: 302). Creating public space is primarily possible by providing ease of movement. This is possible with physical aspects like ramps, signs, newspaper stands, lights, benches and trash bins. Moreover, waiting and resting areas along walkways or public space provide welcome relief to fulfil the accessibility of vulnerable people.

The quality of the path itself is also essential for pedestrian movement with different aspects like sidewalk width and paving (Southworth and Lynch, 1974). There should be an ideal balanced width for ease of movement for pedestrians. The balance on sidewalk width could be determined according to functions, location and number of users. There are different standards or approaches for sidewalk width in accordance to different aspects and needs (Emery, 2003 and Gassaway, 1992, cited in Southworth, 2005: 251 and Duany et al., 2010: 9.1). In any case, wider paths would enrich social and cultural life along boulevards or public spaces. Similarly, Moughtin and Mertens (2003: 141) focus the ratio between the width of street and height of enclosing

structures along the street. In any case, the width of the street should be designed for unimpeded movement (Pedestrian & Streetscape Guide, 2003: 94).

In addition to the width of paths, the quality of paths is so important for encouraging pedestrian movement. Moughtin et al. (1999: 90-93) indicate three main functions of pavements as providing hard, dry and non-slippery surface, a sense of direction, and strengthen the character of place. The pavement could vary according to the location, which is not only rural or urban but also commercial, residential, business districts, etc. (Pedestrian & Streetscape Guide, 2003: 82). For example, for historic cities, the design and construction quality of pavements are essential to conserve the character of an area in accordance with historic structures. Respecting local details and conserving the visual continuity of street are fundamental in the process of maintaining and restoring historic paving (English Heritage, 2000: 2). Pedestrian pavement has to provide the comfort and safety of pedestrians. Successful paving must be appropriate for its use and accomplish the primary functions of comfort (Emery, 2003 and Gassaway, 1992 cited in Southworth, 2005: 251).

As followed above, Goodman and Tolley (2003: 74) mention that the physical conditions of footways or pathways have larger amount of research attention that other issues. Even most basic components like the locations of litters or street furniture, on street parking or overhanging trees are different research topics. In any way, it is obvious that, improved and maintained pathways can promote or motivate people to walk. According to results of the EU funded project WALCYING (1998 cited in Goodman and Tolley 2003: 74) (walking-cycling), infrastructural and political measures including more pathways, wider pavements and prohibition of cycling on pavements encourage people to walk. Other researches also indicate essential role of wider, cleaner, continuous and maintained footways to increase or encourage walking, especially around the work site (Goodman and Tolley 2003: 74).

In addition to walking paths, Duany et al (2010: 3.12) emphasize that all significant destinations should be accessible by bicycle. In detail, bicycle paths, bicycle lanes,

bicycle boulevards and shared routes are alternatives of bicycle routes. In many cases, shared routes are more popular to increase accessibility of sites.

Table 2.1. Indicators of accessibility, key terms and variables

Indicators	Variables / Key Terms	References
Accessibility	– Increasing numbers and speed	Litman, 2011: 4
	– Income groups / lifestyle choices	Bauman, 1998: 86 cited in Shortell, 2016: 3
	– Parking, roads, public transport, walking and cycling policies	Marshall, 1999
	– Public space must be accessible to public at all times	Whyte, 1980: 65
	– Vehicle traffic is easier than pedestrian movement – The distribution of functions – The quality of the pedestrian conditions and facilities – The quality of sidewalks and cycling facilities, street connectivity and geographic density – Street connectivity, transit service, geographic density or the quality of highways, air service, bus and train services	Litman, 2011
	– Land use – The relation between capacity and traffic congestion	Lyons, 2011: 160
	– The minimum amount of travel and cost – Self-sufficient zones – Waiting and resting areas along walkways or public space	Duany et al., 2010

Table 2.1: continued

Indicators	Variables / Key Terms	References
Accessibility	– Ease of movement / travelling – Access to public transport – Parking – Orientation – Unimpeded movement – The quality of paths	Moughtin and Mertens, 2003: 131, Moughtin et al. 1999: 90-93
	– Different public transport modes like bus or railway – The locations of stops and walking distance to them – The visibility of stops and the amenities of them – Safety and continuity of paths – Sidewalk width and paving	Southworth 2005: 251
	– More pathways, wider pavements and the prohibition of cycling on pavements – Wider, cleaner, continuous and maintained footways	Goodman and Tolley 2003: 74
	– Parking – Parking zones, dropped curbs, consolidating entrances – Continuing walkways – Ease of movement – Physical aspects like ramps, signs, newspaper stands, lights, benches and trash receptacles – Waiting and resting areas along walkways or public space	Jacobs 1995: 305 Crankshaw, 2009: 75
	– Legibility is the ability to read / understand easily space. – Permeability enables short and direct route choices	Bendey et al., 1985: 12, cited in Kolody, 2002: 4-5

Table 2.1: continued

Indicators	Variables / Key Terms	References
	– Distance from home to green space – Functional levels for green space qualities	Van Herzele 2003
	– Distance and gathering points	Urban Mobility Report, 2011
Accessibility	– Low cost of movement and relation within activities – Orientation includes variety of factors – Directed lines, sequence, landmarks and special spaces – Natural factors like topography or sea-side – Morphological characteristics like grid system	Lynch 1953, cited in Banerjee and Southworth, 1995: 68

2.4.2 Impact Zone

Natural elements, meeting places, gathering places and unique features are essential for pedestrian movement. Street networks with natural elements would create unique characteristics for public spaces. Lambert (2005: 25) states that open spaces like park, playgrounds, natural parks, lakes, rivers, sea-sides and pathways are attractive to live near or to have easy access. Therefore, the connections to such open spaces are essential for public. Whyte (1980: 54) underlines essential roles of connection between streets to park or green spaces and maintains streets as critical design factors.

In this context, public space is significant component of the city with varying forms like streets, squares, open spaces or parks. Therefore, the relations, paths or connection between them as the network within city means, movement of good and information or mobility of people with vehicles or as pedestrians. Variety and diversity of activities and modes within public space provide satisfaction for citizens. Thus, easy access between such spaces with street network especially by pedestrians create a liveable city with vital public spaces (Akkar, 2007: 116).

Public green spaces and water areas are of great importance for city life with ecological benefits and recreational facilities, they also enrich urban landscape by framing development sites. Therefore, open spaces should have varying connection to effectively improve public realm (Montgomery, 1998: 111). Southworth (2005: 250) states that plans including different pedestrian path types are essential to connect the street network with the places accommodating unique features and visual interests. Also, streets can be designed to create some visual interest for pedestrians. In sum, street network between public spaces with unique features and visual elements emphasize walkable urban space.

Gehl (1995, cited in Montgomery 1998: 110) underlines streets as the most important elements of public space, because streets are network of spaces where citizens are free. Moreover, public realm is not only just a meeting place, but also a space for social and cultural activities including local traditions, custom like festival and carnivals those, which are components of local identity.

Duany et al. (2010: 3.2) assert that transportation planning should be made initially with regard to land use characteristics in order to contribute to the effective and equal use of all modes by all citizens. Thus, citizens can travel in the city without having any problems from pedestrian to tram or metro (Garbrecht, 1981, Southworth, 2005: 251). As a result, linking the pedestrian network with other modes of transport increases pedestrian activity, reduces the need for car use and parking, and connects pedestrians to important gathering places in the city, such as public spaces, stations and bus stops.

Table 2.2. Indicators of impact zone, key terms and variables

Indicators	Variables / Key Terms	References
Impact Zone	– Open spaces like park, playgrounds, natural parks, lakes, rivers, sea-sides and pathways are attractive to live near or easy access – The connections to such open spaces	Lambert 2005: 25
	– Connection between streets to park or green spaces – Maintains streets as critical design factors	Whyte 1980: 54
	– Variety and diversity of activities and modes	Akkar, 2007: 116
	– Public green spaces and water areas	Montgomery, 1998: 111
	– Visual interests. – Streets – Street network between public spaces	Southworth, 2005: 250
	– Streets – Space for social and cultural activities including local traditions, custom like festival and carnivals	Gehl, 1995, cited in Montgomery 1998: 110
	– Land use characteristics	Duany et al. 2010

2.4.3 Public Recreational Facilities

Public recreational facilities should be evaluated not only with qualitative or quantitative terms, but also with their locations. In other words, spatial features are essential for public space. Public recreational facilities can be evaluated according to availability of facilities like indoor sports, park, playground or sport fields and availability of equipment.

Duany et al (2010: 4.10-4.11) underline essential role of providing natural areas close to dwellings. Access to nature is a basic right, especially for those without means to

drive. Therefore, linking green areas by continuous systems as corridors and public space is crucial for public benefit.

In addition to availability of facilities and equipment, sitting facilities or making a place sittable is a challenging issue for design. Probable pedestrian flows, placement of steps, trees, trashes or street art elements increase the parameters or components of place (Whyte, 1980: 39). Therefore, users would prefer different places than designed ones. However, in any condition, the seating area is definitely a prerequisite. The most attractive fountains, the most striking designs or even just seaside cannot encourage people to come and sit without a place to sit (Whyte, 1980: 28). In defined context, services and amenities, sports activities, picnic tables, water fountains, restrooms and trash bins are basic facilities for users.

Table 2.3. Indicators of public recreational facilities, key terms and variables

Indicators	Variables / Key Terms	References
Public recreational facilities	– Providing natural areas close to dwellings. – Link green areas into continuous systems as corridors and public space	Duany et al., 2010
	– Availability of facilities and equipment, sitting facilities or making a place sittable – Probable pedestrian flows, placement of steps, trees, trashes or street art elements – services and amenities, sports activities, picnic tables, water fountains, restrooms and trash bins	Whyte, 1980

In defined context of mobility, according to key component as accessibility, impact zone and public recreational facilities, in any case, there are different indicators of key features of mobility, but this does not mean they are totally separated from each other. As followed in discussion, accessibility, impact zone and public recreational facilities

determine an overall mobility. Table 2.4 summarizes measurable or comparable indicators of mobility.

Table 2.4. Indicators of mobility in terms of accessibility, impact zone and public recreational facilities

ASPECT	INDICATORS
Accessibility	– Availability of alternative transportation modes – Presence, location, continuity and obstruction of sidewalks – Sidewalk width and condition – Presence, location continuity and obstruction of bike lane, condition of bike lane – Parking and on street parking – Orientation – Public transport
Impact Zone	– Land use (mixed used commercial+residential, public places) – Diversity – Linkage between impact zone to case area
Public Recreational facilities	– Availability of facilities (indoor fitness facility, Park, Playground, Outdoor pool, Beach, Sports playing field, basketball court, tennis court (park or school), Marina – Availability of equipment (playground equipment, sports equipment, etc.) – Service amenities – Equipment rental stand – Sports stands/seating – Picnic tables – Water fountains – Restrooms – Vending machines – Trash bins

2.5 Pedestrian Behaviour

In today's world, there has been a growing interest to understand pedestrian behaviour. Most of the large-scale transportation researches include pedestrians as an integral part of overall study. However, predicting pedestrian behaviour is more difficult than vehicular traffic that is usually analysed and forecasted by quantitative systems.

Vehicular traffic is limited by lanes, while pedestrian has mostly free environment to mover and complex behaviours. Therefore, the simulation of pedestrian behaviour is challenging issue. Hillier (et al., 1993, cited in Johnson, 2002) tries to natural movement patterns at local scale in relation with the accessibility of streets. However, the analysis has just encountered changes in pedestrian flow in relation with the geometry and locations of streets. Therefore, the study could not understand movement patterns at the local scale in urban environment. In a defined boundary of urban environment, counting pedestrians passing is a well-known method to stimuli movement pattern. It would be acceptable for limited number of streets. However, larger scales than street(s) such as town centre, squares or commercial zones including buildings, public space and sidewalk space-syntax does not work within differences in physical environment, perception and time-distance dilemma. Therefore, theories like meanwhile varying pedestrian behaviours emphasize a social behaviour, which is described as an interaction of individuals sharing a moment in a same space. In general terms, in order to be able to explain the dynamic movement in urban environment, the complex patterns could emerge from only simple social actions.

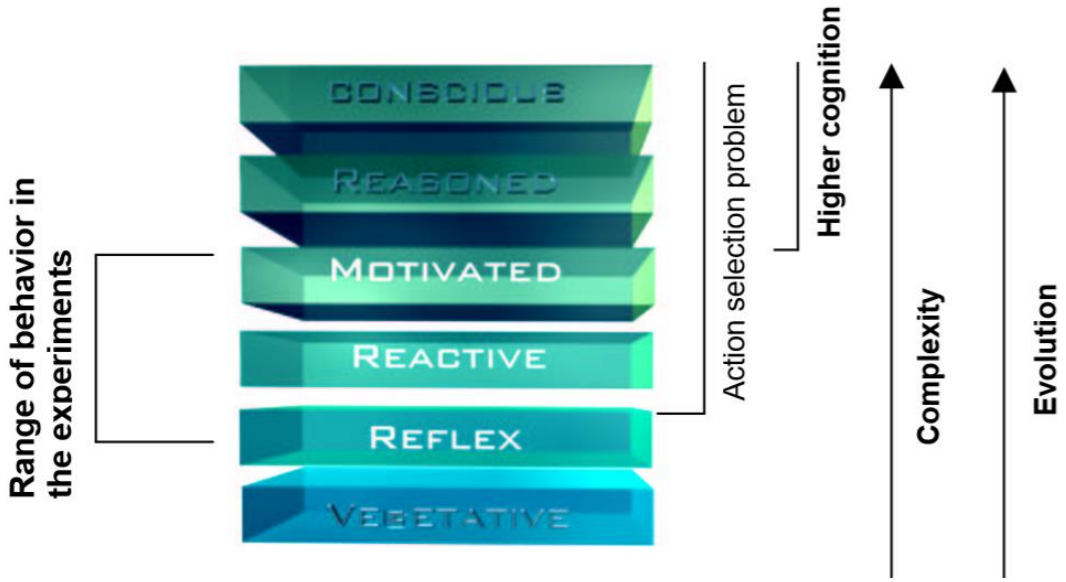


Figure 2.10. Hierarchy of individual behaviour

Tuan (2001: 161) claims that place might be defined in variety and place is not stable. For example, panoramic scenes let us to define a point of interest, so each scene creates a boundary pause or resting area.

Madanipour (1996: 76-8) expresses that *"walkers in the city, representing spontaneity and a challenge to the established order, are best exemplified by the mid-nineteenth century flâneur (strollers, loiterers) of Paris. Their main interest was the microscale aspects of street life, rather than the official public city that Baron Haussmann and Napoleon III had created"* (Wilson,1991 cited in Madanipour, 1996).

Peponis and Wineman (2002: 271) indicate the relation between space and people behaviours as boundaries and connections defining built space also guide behaviours, activities, and people come together or remain apart. Boundaries will let to create enclosure, contiguity, containment, subdivision, accessibility and visibility or not. To understand those relations, behavioural mapping is usually used for studies of environment and behaviour. Movement, disconnection and awareness in the urban area are subjected to various independent activity programs and the use of space. Therefore, in terms of the characteristics of spatial settlement, the movement can be understood more effectively than the programmed purpose. If the correlations between the pattern of movement and pattern are defined, it can be clearly attributed to the adaptation of the pattern to a specific, not generic programmatic function. Therefore, the syntactic studies of mobility aim to identify critical problems that arise at the interface between the spatial and programmatic aspects of the organization (Peponis and Wineman, 2002: 280). However, movement and awareness in urban space are independently varying according to activity and space use. Therefore, movement can be understood more effectively with respect to properties of spatial layout than to programmatic purpose. Then, patterns of behaviour and social relationship and their contributions to physical environment could be understood (Peponis and Wineman, 2002: 287).

Lefebvre (2017) also developed a term, actually a new research discipline as “rhythmanalysis” to investigate rhythm in space, time and daily life. The discipline

focuses on the analysis of cyclic and linear rhythms, clocks, days, waves, musical sounds, and body movements of people. Thus, rhythm is brought to the centre of philosophical thought and social theory. Lefebvre (2017), first of all, focuses on the term of rhythm in accordance with time and daily life routines. The analysis of daily life shows how and why social time itself is a social product. Everyday life is measured in two ways. On one hand, basic rhythms and cycles continue, on the other hand the quantized time imposes uniform repetitions. The cycles give them vitality by cutting through repetitions. From a rhythmic analysis, "days" and the use of time in social categories will base on gender and age. Lefebvre emphasizes on discussion with variety of meal times in different countries or ages and gender, so their routines (Lefebvre, 2017: 100-101).

Similar to rhythms in time, there are rhythms or daily routines in space. When a group of people or any crowd are observed during the peak hours, a certain order will be obtained that manifests itself through rhythms in obvious disorder. There are random or planned people to form a polyrhythm. The variety let to a rhythmist knows how to listen to a square, a market or a boulevard. There are two kinds of rhythm linear and cyclic. Linear rhythms are usually made up of human and social activities, especially the actions during work and cyclic and linear continuous interaction (Lefebvre, 2017: 113-115). Ceremonies, festivals, carnivals, political ceremonies, commemorations or voting in public space increase daily rhythm that happens most often in the flow of cyclic time, at fixed times, days, or events. Meanwhile, political power tries to dominate or seek to control public space including monuments and squares. However, if palaces and churches have a political meaning and goal, the citizens will turn that meaning and goal in a non-political way by resisting state within a certain amount of time. Thus, public space, the space of representation, becomes the place for instant walks and encounters, intrigues, negotiations, trade and bargains. Thus, the time and rhythm of the people in this space are connected to itself, the space (Lefebvre, 2017: 119-121).

Shortell (2016: 2) points out walking not only as practical activity but also as a way of living in the city with extending the social realm within or between home and work.

Walking has a relation with the new rhythms of urban life and urban spaces and has a significant effect on urban rhythm and practice. For example, “nocturnal city” is a story for walking as casual mobility and the desire of authorities to control it (Schlör, 1998 cited in Shortell, 2016: 2).

Carmona et al (2010: 88-90) underline the importance of environmental perception for pedestrian behaviour, and express that sight, sound, smell or touch offer clues for perception to get information about environment that affect us and then be affected by us. In addition, Carmona et al. (2010: 106) criticise Lynch's analysis based on mental maps, and interviews and defined five physical elements as paths, edges, districts, nodes and landmarks because of disregarding observer variations, legibility, imageability, meaning and symbolism. However, in any case, an understanding of the relationship between community and its environment is crucial for planning and urban design.

Urban cognition and aesthetics are essential components of urban life. In Lynch’s (1960) terms; imageability means clear identity and structure let us to know where we are oriented and how we reach to desired places being lost particularly for a newcomer. Therefore, an imageable city let us to feel secure by means of hints from spatial environment (Lynch, 1960 cited in Nasar, 1989: 32). Furthermore, improvements in visual quality of cities enhance psychological well-being and spatial behaviour. Psychological well-being is related with individual’s inner features. On the other hand, spatial behaviour refers to how people use the environment and their relation with environment, their visits, visiting times, frequency or avoiding such places (Nasar, 1989: 37).

Babalık-Sutcliffe (2013, 417-8) underlines direct relation between encouraging public transport and non-motorized journeys and higher densities of development to reduce distances between activities. Therefore, providing walking, cycling, and public-transport alternatives will be viable alternatives. Similarly, Papadimitriou et al. (2009) evaluate pedestrian behaviour according to route choice and crossing behaviours, so interactions between pedestrian and traffic are crucial determinants.

Similarly, Kitazawa and Batty (2004) combine socio-economic datasets with pedestrian agents to measure scheduled activities. Then, they state that, each agent / pedestrian makes their next behaviour or decision according to information gathering, destination choice, route choice and local movement. Antonini (et al, 2006) evaluates pedestrian movements and behaviour together. Destination, route, collision avoidance and walking behaviour models are listed for alternatives of pedestrian movements analyse. In addition to them, crowd effects and calibration determine pedestrian behaviours.

Sisiopiku and Akın (2003) analyse pedestrian behaviours, perceptions and preferences by varying physical facilities like environmental designs, urban forms, safety and comfort. In their study, they used video images of pedestrians and questionnaires to evaluate those indicators. In addition to physical built-up facilities, Kürkçüoğlu and Ocakçı (2015) underline human and social factors like personal preferences, natural factors and time issues in determining pedestrian behaviours. According to Strohmeier (2016), especially, seasonal influences and personal characteristics like gender, age, persons per household, education, etc. affect mobility behaviours more than other factors.

In a similar perspective, Mateo-Babiano and Ieda (2007: 1921) focus on pedestrian-need hierarchy from mobility to identity. According to their research, some needs like protection are more important than mobility in terms of pedestrian needs. The pedestrian needs evolved as a term defining response to create better walking environment, especially base on human needs theory of Maslow (1954, cited in Mateo-Babiano, 2016: 109).

Needs	Description
Mobility	Barrier-free movement from point of origin to destination
Protection	Safe and secure walking experience
Ease	Emotionally and mentally secure, comfortable, convenient and stress-free walking experience
Equity or equitable access	Equitable access to everyone (e.g. transport-disadvantaged persons), allows various activities and opportunities to take place
Enjoyment/leisure	Opportunities for self-expression, socialisation and interaction
Identity	Sense of place, sense of belonging, unique and distinctive character of place, which includes the ideology and culture of the place

Figure 2.11. The pedestrian needs (Mateo-Babaiano, 2016: 109)

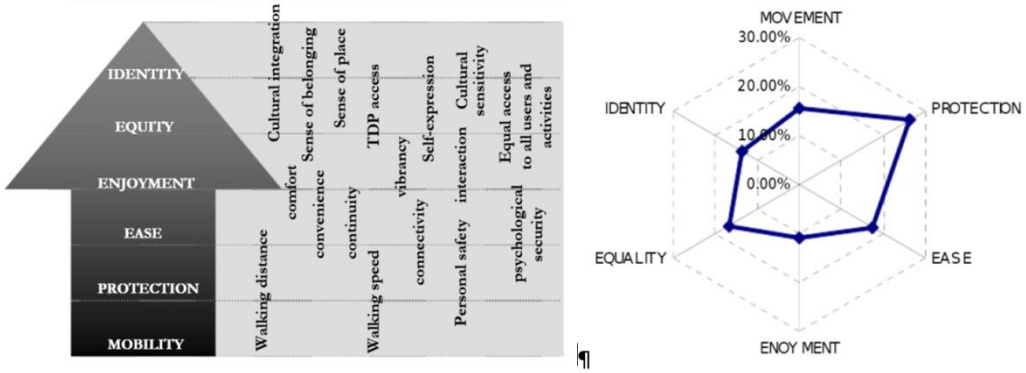


Figure 2.12. The pedestrian need hierarchy and the survey result (Mateo-Babaiano and Ieda, 2007: 1921)

Lyons (2011: 167) summarizes internal and external factors changing pedestrian behaviours determined by where to locate (home, work, school), how to travel (which mode and route) or when to travel (time or day or weekend). Furthermore, mobility resources (motor vehicle, ownership or seasonal tickets) or driving habits will affect the number of pedestrian flow. Sometimes, using information and technologies to access people, goods, service or opportunities decrease mobility.

In urban design, there are subtle qualities influencing preferences for travelling. The perceptual qualities of urban landscape and urban design qualities determine physical characteristics and behaviours, then encourage or discourage people to walk. Because of physical and social context of discussion, reliable methods base on appropriate criteria and methods are required. Moreover, perceptual qualities are different from more measurable qualities like sense of comfort, sense of safety or level of interest base on reactions, assessments and attitudes (Ewing and Clemente 2013: 2-3). In defined context, they suggest a method to objectively measure five intangible qualities of urban design as imageability, visual enclosure, human scale, transparency, and complexity. In fact, the method focuses on pedestrian activities and counting them with field records to construct such methods and replicate result in different context (Ewing and Clemente 2013: 84). There are urban design criteria for walkability developed by Ewing and Clemente (2013) but in the context of the street, therefore, in this study criteria associated with green space are defined.

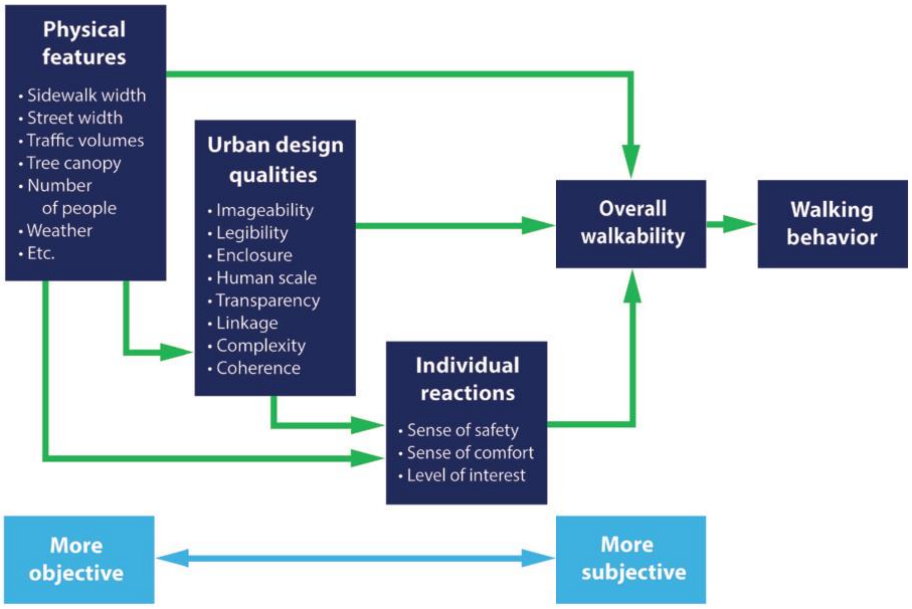


Figure 2.13. Walking behaviour and urban design qualities

Ewing and Handy (2009: 66) focus on personal perception and their implications then prepared a list including 51 perceptual qualities.

adaptability	distinctiveness	intricacy	richness
ambiguity	diversity	legibility	sensuousness
centrality	dominance	linkage	singularity
Clarity	enclosure	meaning	spaciousness
coherence	expectancy	mystery	territoriality
compatibility	focality.	naturalness	texture
comfort	formality	novelty	transparency
complementarity	human scale	openness	unity
complexity	identifiability	ornateness	upkeep
continuity	imageability	prospect	variety
contrast	intelligibility	refuge	visibility
deflection	interest	regularity	vividness
Depth	intimacy	rhythm	

Figure 2.14. Perceptual qualities

Imageability is related to sense of place. Gehl (1987: 183 cited in Ewing and Handy, 2009: 72) emphasizes imageability by means of Italian city squares including life, climate, architectural quality etc. to create a total impression. All factors together would create a feeling of physical and psychological well-being. Imageability is also related to urban design qualities—legibility, enclosure, human scale, transparency, linkage, complexity and coherence (Ewing and Handy, 2009: 72). According to field studies, Ewing and Handy (2009: 72) determine some qualitative data base on the number of people, visible in a scene, including those standing and sitting and also moving pedestrians. In defined context, number of people, proportion of historic buildings, courtyards, plazas, and parks, outdoor dining, landscape features, noise level and even number of buildings with non-rectangular silhouettes contribute significantly to imageability. Figure 2.15 summarize urban design qualities with significant physical features.

Urban design quality	Significant physical features
Imageability	people (#) proportion of historic buildings courtyards/plazas/parks (#) outdoor dining (y/n) buildings with non-rectangular silhouettes (#) noise level (rating) major landscape features (#) buildings with identifiers (#)
Enclosure	proportion street wall—same side proportion street wall—opposite side proportion sky across long sight lines (#) proportion sky ahead
Human scale	long sight lines (#) all street furniture and other street items (#) proportion first floor with windows building height—same side small planters (#) urban designer (y/n)
Transparency	proportion first floor with windows proportion active uses proportion street wall—same side
Complexity	people (#) buildings (#) dominant building colours (#) accent colours (#) outdoor dining (y/n) public art (#)

Figure 2.15. Urban design qualities (Ewing and Handy, 2009: 72)

There are different definitions of human scale for urban designer. In fact, the most of them suggest that the width of buildings, not just the height, defines human scale. In addition to volume of structures, human speed can also define human scale. The perception of built environment is changing while driving a car or walking. Moreover, street trees or small-scale elements would moderate the scale of tall buildings and wide streets to set human scale. Furthermore, some features like paving patterns, amount of street furniture, depth of setbacks on tall buildings, presence of parked cars, ornamentation of buildings and spacing of windows and doors will help to determine human scale. In sum, human scale refers to size, texture, and articulation of physical elements, which match the size and proportions of humans (Ewing and Handy, 2009: 76-7).

Ewing and Handy (2009: 79-81) underlines another urban design quality as complexity relating with the number of noticeable differences for people per unit time. Rates and frequency are essential for complexity. Similar to factors affecting human scale, trees contribute to enhance complexity of the built environment. Furthermore,

street furniture, signs and boards are other elements with varying features like location, shape, colour, direction and lettering style. Then, of course, the presence and activity of people enrich the complexity of a scene. Ewing and Handy (2009: 80) indicate that Alexander (1965), Gehl (1987) and Jacobs (1961) emphasize diversity and vitality as the source of complexity.

As a general research, Mateo-Babiano (2017: 110) states that there are different descriptions of walking environment in terms of safety, security, convenience, comfort, continuity, system coherence, visual and psychological attractiveness. Safety and security have always been a strong influence on pedestrian behaviour, especially for women to walk. On the other hand, ease is defined as attributes in the environment promoting navigating in a walking environment easier. Equitable access or equal opportunity to pedestrians regardless of age, gender or disability is crucial to provide participation in walking. Moreover, people also have other needs like socialisation or enjoyment. Therefore, at the top of the list, there is socialisation and enjoyment including attractiveness and vitality. Thus, spaces should be designed to encourage planned and unplanned social interactions (Jacobs, 1961 and Gehl, 1987 cited in Mateo-Babiano, 2016: 110), which will be increased by the perception of a more positive urban environment.

In the following parts of the chapter, safety, aesthetic quality, connectivity, comfort, attractiveness, personal characteristics and time are examined as the indicators and components of pedestrian behaviour.

2.5.1 Safety

Security, stability, dependency, protection, freedom from fear, from anxiety and chaos, need for structure, order, law, limits, and strength in the protector are all safety needs of the society, which are mostly the physiological needs. In fact, in defined context, everything looks less important than safety and protection. Actually, safety seems some kind of undisrupted routine or rhythm base of predictable, lawful, orderly world (Maslow, 1954: 39-40).

Providing safety for pedestrians is an essential part of making public space. Southworth (2005: 250) sorts many issues like traffic and street crime, placement and length of crosswalks, signs and signals or night lighting as factors on pedestrian behaviour. Furthermore, Rapaport (1987: 84) indicates other set of factors such as distance, weather, topography, as well as crime and traffic on the street. Perceived safety bases on feelings of user curiously hesitates from undesirables, who would be muggers, dealers, or truly dangerous people or "marginal" groups. The number of undesirables would increase according to place and visitors in site. Whyte (1980: 60-62) emphasizes best way as making place attractive to everyone else. Therefore, plazas and smaller parks in most central business districts will be probable safe place for everyone or user. In defined context, safety would be evaluated as actual safety or perceived safety.

Physical properties in public space would determine actual safety by design features and traffic calming measures (Lambert, 2005: 78). Public space primarily requires safe pedestrian movement, so Jacobs (1995: 272) defines safety as permitting people to walk with a sense neither of crowding nor of being alone, but a balance with vehicular traffic. In fact, traffic is one of the key dimension of the safety in public space. Therefore, traffic calming including crossing and slowing down or separating pedestrian and traffic flow is essential part of public space management.

In fact, for actual safety, traffic calming is a special issue with different attributes. Appleyard (1981: 283,284) points out that controlling speeds, signals at crossings for safely cross, slowing down traffic in narrow streets would improve pedestrian safety. For traffic calming, there are different elements or pedestrian-friendly strategies like chokers, speed bumps, raised crosswalks, narrowed streets, rough paving, traffic diverters, roundabouts, and landscaping (Southworth, 2005: 250). Moreover, curbs and sidewalks can be designed to enhance pedestrian safety or street trees would create a buffer zone between pedestrians and vehicles (Jacobs,1995: 293).

On the other hand, perceived safety of pedestrians is related with feeling safe from crime, vehicular traffic or similar dangers, and so different from physical safety. For

example, fear or anxious based on vehicular traffic, even there are physical barriers, means lack of perceived safety. According to perceived safety, pedestrian decides whether to walk or not (Evans, 2009, Wheeler, 2001 and Kolody, 2002). Appleyard (1981: 35) points out that traffic has negative influence on the sense of personal territory.

However, physical dimension would have a positive effect on perceived safety. Barlas (2006: 84) underlines the enclosure of street as an essential factor determining perceived safety and such transition spaces like courtyards, cortiles, balconies etc. as components of control. In any way, a well-designed street would encourage pedestrians to walk by feeling safe from crime and vehicular traffic (Kolody, 2002: 4-8). Therefore, design elements such curbs, sidewalks or ever trees could create a pedestrian zone where pedestrian feel safe (Jacobs, 1995: 273).

In addition to physical issues to enhance perceived safety, there are social, economic or even cultural factors determining safety. Jacobs (1961: 54) states that losing the vitality means danger for safety. In fact, an empty street is usually means unsafe. In defined context, Jacobs (1961: 55) determines three main qualities for public space as the existence of certain boundary between public space and private space, the existence of "eyes on the street" and the existence of users on streets at all times. In addition, transparency along the street would let an auto control by providing eyes (Jacobs, 1995: 286)

Personal or perceived safety would be both a physical or a social barrier to walking, however, most of the solutions based on changing the built environment. Fear of crime has a significant impact on personal security and as a result there are implications on walking. Fear of crime because of dark and isolated locations will not encourage people, especially women, to walk. Therefore, working hours, the route from home to work or school and gender are essential variables affecting walking encouragement. Safety factor also affect public transportation because of waiting and walking stages to access stops (Goodman and Tolley, 2003:77).

Table 2.5. Indicators of safety, key terms and variables

Indicators	Variables / Key Terms	References
Safety	– Security, stability, dependency, protection, freedom from fear, from anxiety and chaos, need for structure, order, law, limits – Undisrupted routine or rhythm base of predictable, lawful, orderly	Maslow, 1954: 39,40.
	– Traffic and street crime, placement and length of crosswalks, signs and signals or night lighting – Pedestrian-friendly strategies like chokers, speed bumps, raised crosswalks, narrowed streets, rough paving, traffic diverters, roundabouts, and landscaping	Southworth, 2005: 250
	– Distance, weather, topography, as well as crime and traffic	Rapoport, 1987: 84
	– Hesitates from undesirables	Whyte, 1980: 60-62
	– Design features and traffic calming measures	Lambert, 2005: 78
	– Permitting people to walk with a sense neither of crowding nor of being alone, – Balance with vehicular traffic – Traffic calming – Curbs, sidewalks, street trees – Buffer zone between pedestrians and vehicles – The existence of "eyes on the street" – The existence of users on streets at all times – Transparency along the street	Jacobs, 1961: 54, 55 Jacobs, 1995: 272

Table 2.5: continued

Indicators	Variables / Key Terms	References
Safety	– Speeds, signals at crossings for safely cross, slowing down traffic	Appleyard, 1981: 283,284
	– The enclosure of street – Transition spaces like courtyards, cortiles, balconies	Barlas, 2006: 84
	– working hours, – the route from home to work or school – gender	Goodman and Tolley, 2003: 77

2.5.2 Aesthetic quality

Lang (1987) underlines perception, evaluation, and meaning to design/planning decisions as key aspects of aesthetics. Maslow (1954: 2-6) defines beauty, symmetry, and possibly simplicity, completion and order as aesthetic needs. In addition to emotional, cognitive and expressive needs, aesthetic needs give to science its origins and its goals. The gratification of any such need is a "value." The aesthetic satisfactions are values to not only to the mathematician and to the scientist but also to the craftsman, the artist and the philosopher.

Lofland (2017: 77) states a direct relation between different forms of pleasure and aesthetic and then she claims that; not only can a relational form of pleasure, but also their types of realms can be found in public spaces. In other words, public space appears to provide a particularly favourable environment. Perceptual innuendo, unexpectedness, whimsy, historical layering and crowding are forms of aesthetic pleasure. In addition to them, public solitude, people watching, public sociability and playfulness are other forms or sources of interactional pleasure. Jacobs (1961: 103-6 cited in Lofland, 2017: 78, 79) points out intricacy, sun, and enclosure as essential design elements for successful parks in terms of aesthetic. Similarly, Whyte (1988 cited in Lofland, 2017: 79) says that available water, wind, trees, and light could contribute to the design of public spaces.

In detail, perceptual innuendo is defined as catching attention or glimpsing from a small part of the built environment that would be an interesting or exotic piece. Perceptual innuendo would be the aesthetic equivalent of people watching for someone else or incompleteness of the information-letting reign to imagination for other ones. Although someone suggest familiarity as a strong preference for urban places, unexpectedness seems also to appeal for some individuals at least. Sometimes, the range of physical objects and their arrangement could seem pleasurably unexpected is enormous. Although whimsical object or arrangement is just fictitious or meaningless, the terms eccentricity or fantastic seem more interesting and attractive. The fourth source of aesthetic pleasure bases on multi-layered development of urban areas slowly and relatively long periods that cause an urban continuum in public spaces. The structures of older age create a kind of panorama of overlapping architectural styles by-structures or remains from different eras. The last form of aesthetic pleasure, crowding or diversity together of people and things and elements would evoke pleasure (Lofland, 2017: 80-7).

In addition to aesthetic pleasure, which are derived from visual understanding of both the built environment and those who are populating it, there are other kinds of pleasure based on human interaction. First, public solitude basically means a sense of oneness with the other inhabitants of a setting. People-watching that seeing and being seen-may be a ubiquitous activity like the Parisian flâneur as a social type. Public sociability involves spoken interaction between and among others, and it is one of public pleasure. Lastly, playfulness or fantasy events are part of public spaces creating interesting events (Lofland, 2017: 88-94).

From single sites to streets, to districts and to settlements, there is a hierarchy of different elements, so there is no a single or basic set of aesthetic criteria for applying everywhere. Aesthetic requirements may vary according to characteristics of the areas, and of course users' needs, characteristics or qualifications. In defined context, speed of movement is a crucial factor affecting visual needs. As Lozano (1974 cited in Nasar, 1989: 48) states that; when movement speed increases, concentration increase, so that peripheral vision and the scale of environment noticed changes decrease. In defined

context, moderate levels of complexity, high coherence, familiar and historical elements, vegetation, more open spaces and reductions in traffic, traffic noise or dilapidation, etc. could be used to enhance aesthetic value (Nasar, 1989: 48-9).

Table 2.6. Indicators of aesthetic quality, key terms and variables

Indicators	Variables / Key Terms	References
Aesthetic quality	– beauty, symmetry, and possibly simplicity, completion and order	Maslow, 1954: 2-6
	– Perceptual innuendo, unexpectedness, whimsy, historical layering and crowding / the forms of aesthetic pleasure – points out intricacy, cantering, sun, and enclosure – available water, wind, trees, and light – human interaction – incompleteness of the information – unexpectedness – eccentricity or fantastic – multi-layered development of urban areas – crowding or diversity together of people – playfulness or fantasy events	Lofland, 2017: 77 Jacobs 1961:103-6 cited in Lofland, 2017:78-9, Whyte 1988, cited in Lofland, 2017:79
	– moderate levels of complexity, – high coherence, – familiar and historical elements – vegetation, – more open spaces and reductions in traffic, traffic noise or dilapidation	Lozano, 1974 cited in Nasar, 1989:48 Nasar, 1989:48-9

2.5.3 Connectivity

As mentioned in the parts of Accessibility and Pedestrian Behaviour, connectivity of public space is a significant factor for public space. If walking is a mode of transportation, connectivity of path network would become an important component of accessibility in terms of mobility. The connectivity means continuous and well-

maintained sidewalks and paths for pedestrians. Maintenance is critical because interruptions will discourage pedestrians (Calthorpe, 1993: 101, cited in Kolody, 2002). Connectivity would be evaluated in terms of the number of connections in path or road network and the directness of links. Number of alternatives, short links, intersections, and minimal dead-ends (cul-de-sacs) enhance pedestrian movement. The connectivity has direct relation with travel distance, alternative routes and time concern (VTPI, 2011). Furthermore, the connection of path network without major obstacles is crucial.

The presence of sidewalks and paths and their continuity determine the connectivity of the path network, which is also affected by street pattern (Southworth, 2005: 249). Density of path intersections and block sizes could enhance the connectivity while minimizing busy arterials, railroad, rivers or topographic features. In defined context, Duany et al. (2010: 9.6) points out crucial role of a pedestrian zone, which would be just a route or physically defined zone that should be kept clear to create a walkable environment. Burden (2000:15) sees connectivity as the connection of places for different functions like home, work, school or shop.

Hillman (1990 cited in Goodman and Tolley 2003:76) argues that one of the most important obstacles to walk is the presence of destinations within walking distance because of growth trend towards rationalization of public and commercial facilities, decreasing housing densities and peripheral positioning of facilities. Those types of dynamics cause losing patterns of activities and lengthening journeys generally beyond reasonable walking distance. On the other hand, in higher urban densities, ownership is lower and levels of public transport use, cycling and/or walking is much higher because of considerable feasibility of walking and cycling (Newman and Kenworthy, 1989; Hillman, 1998 cited in Goodman and Tolley, 2003:76). In any way, there are varying studies suggesting different acceptable walking distance from 0,4km to 3km. However, acceptable distance depends on the physical characteristics of the pedestrian system in terms of design, terrain or personal characteristics like age and gender (Goodman and Tolley, 2003:76)

Table 2.7. Indicators of connectivity, key terms and variables

Indicators	Variables / Key Terms	References
Connectivity	– The accessibility of streets – The geometry and locations of streets	Hillier et al., 1993, cited in Johnson 2002
	– Continuous and well-maintained sidewalks and paths – Interruptions will discourage pedestrians	Calthorpe, 1993: 101, cited in Kolody, 2002
	– The number of connections in path or road network – The directness of links. – Number of alternatives, – Shortcuts, – Intersections – Minimal dead-ends (cul-de-sacs) – Travel distance and time concern	VTPI, 2011
	– The presence and continuity of sidewalks and paths – Street pattern – Continuity to diverse activities – Length of segments – Legible paths	Southworth, 2005: 249
	– Density of path intersections and block sizes – Minimizing busy arterials, railroad, rivers or topographic features	Duany et al., 2010
	– Pedestrian zone – The connection of places for different functions like live, work, school or shop	Burden, 2000:15
	– levels of public transport use, cycling and walking – feasibility of walking and cycling	Hillman, 1990 cited in Goodman and Tolley, 2003:76, Goodman and Tolley 2003:76

2.5.4 Comfort

There are physical and environmental aspects of comfort effecting pedestrian behaviour. Street furniture, features of sidewalk or sidewalk lighting are physical component of comfort. Furthermore, shelters, trees, climatic or natural factors are environmental aspects.

Street furniture are one of the essential features of streets, squares and open spaces in terms of comfort as a critical factor on pedestrian behaviour. Therefore, their forms, materials, placements and even colours should base on existing and desired patterns of use, so they enrich the quality and the aesthetic of place (Crankshaw, 2009:187). A vital and attractive place would be created by appropriate location and form of street furniture (Moughtin et al., 1999:131). In defined context, Khairi (2008: 99) claim that street furniture should be functionally and aesthetically pleasing and must be viewed as elements to strengthen the image of an area/street. On the other hand, using so many street furniture with varying design is not an appropriate solution to encourage pedestrian movement. Three zone of sidewalks or pedestrian paths, which are the building zone, the path of travel and the curb zone, should be evaluated, and street furniture should not be obstructions for pedestrian movement. Successful streetscape design means a clear path of travel and the curb zone, on the outer edge of the sidewalk, is typically the location of streetscape amenities (Steiner and Butler, 2007: 286).

Appropriate street furniture could contribute to the image of a street, district or city and of course public spaces. In historic sites, street furniture offering tangible connections would have relation and hints from the past, so they enrich streetscape (Crankshaw, 2009: 187). Moughtin et al (1999:131) underline the term of “genius loci” of a place, then claim that street furniture should strengthen the unique characteristics of space.

The street furniture which is selected according to the character of the city or the place, or the existing street furniture in historic sites would create an interesting and attractive

streetscape and encourage people to use the space. Then vitality and functions encourage citizens to use public space.

In defined context, there are general principles of street furniture (Crankshaw, 2009 and Duany et al., 2010) in terms of style and placement. In sum, historic and authentic hints with contemporary elements and facilities, visual coding according to functions, clear pathways, emphasizing functionalism, alternatives for individual or groups and aware of disabilities are basic and fundamental aspects of street furniture to make public space.

As another street element, street signs are classified as private and public signs. Private signs or advertisement boards are usually used to attract attention of customers. On the other hand, public signs provide rules, regulations and information for the use of the public space (Crankshaw, 2009: 189). However, in any case, private sector signs should obey some regulations to enrich characteristics of public space. The attractiveness of public spaces is one of the features motivating pedestrians. Therefore, signs should be designed compatible with unique features. The scale of signs, text, character, forms, size and even colour should be coherent with public space (Appleyard, 1981; Southworth, 2005; Crankshaw, 2009; English Heritage, 2000). For public sector signs, they should be located on the curb site, if they are to be placed on the sidewalk. If there is no available space, it is also possible to place signs onto existing street units or structures. In any case, such qualities of signs would create an interesting and attractive streetscape and would encourage people to use public space.

Street lighting is one of the important elements to make public space with pedestrian movement. Street lighting are used to light paths, to illuminate and accentuate building surfaces and other features, to light sidewalks providing pedestrian illumination along alleys and public spaces (Crankshaw, 2009: 181). In fact, street lights have linear continuity by means of their regular location along street and axes. They form lines that the eyes grasp and follow (Jacobs, 1995: 299). Furthermore, street lights are an essential component of streetscape. In any case, pedestrian-scaled path lighting will provide a greater sense of safety, not only perceived but also actual safety (Emery,

2003 and Gassaway, 1992, cited in Southworth, 2005: 251). Therefore, adequate lighting would enhance the attractiveness of public space, itself. For pedestrian-scaled lighting, there are standards or scales for the style, height and placement of lighting.

Trees are natural elements could be used to create walkable environments and to make public space (Emery, 2003 and Gassaway, 1992, cited in Southworth, 2005:251). Moreover, Appleyard (1981: 40) underlines benefits of street trees as providing shade, making vital public spaces, ecological advantages by purifying the air and increasing the oxygen content, and so on. Although there are some disadvantages like blocking the view or maintenance problems, sense of place without visual or local aspects is not possible. (Appleyard, 1981: 42).

In addition to urban landscape quality, there are climatic means of trees for public space of cities. Trees should be related with sitting spaces or sidewalks or open spaces and have to be evaluated as design elements to satisfy enclosure, protect from sun or just feel nice (Whyte, 1980, 46).

As a climatic factor, wind has dual effects on people during summer or winter. In public space and green areas, there should be some niches to use during summer or to protect people at winter. In other words, with its sun and wind protection, the public space or park will be liveable place even in cold weathers. On the other hand, feeling wind during summer has physical and psychological impacts (Whyte, 1980: 44-45). In a similar perspective, relation with sun is also dual character. Whyte (1980: 42) claims that the quality of experience in public space or especially green areas, which can be much greater when there is sun. However, high humidity and high temperature has climatically adverse effects on people to use of public space.

In sum, poor weather conditions are usually seen a reason for driving instead of walking. However, in any way, such structural measures like design of buildings, shelters for pedestrians and providing changing facilities of activities will enhance built environment to encourage pedestrian movement (Goodman and Tolley 2003:75)

Water as an urban design element enriches and vitalizes public space. Whyte (1980) emphasizes that public space and parks provide all sorts of forms like waterfalls, pools, tunnels or fountains as artificial water elements. In the same context, sea, rivers or canals are one of the best things about water is the look and feel of it as urban landscape. Water should be accessible, accessible, touchable, splashable and of course, the water has to be audible (Whyte, 1980: 47-48).

Table 2.8. Indicators of comfort, key terms and variables

Indicators	Variables / Key Terms	References
Comfort	– Street furniture – Forms, materials, placements and colours – Location and form of street furniture – "genius loci" – Street signs and Street lighting	Crankshaw, 2009:187, Moughtin et al., 1999:131, Duany et al., 2010
	– Street furniture should be functionally and aesthetically pleasing	Khairi, 2008: 99
	– The path of travel – The curb zone – Street furniture – Successful streetscape	Steiner and Butler, 2007: 286
	– Trees are natural elements – Walkable environments	Emery, 2003 and Gassaway, 1992, cited in Southworth, 2005:251, Appleyard, 1981: 40
	– Wind – waterfalls, pools, tunnels or fountains as artificial water elements	Whyte , 1980: 44-45
	– Weather conditions	Goodman and Tolley, 2003:75

2.5.5 Attractiveness

The Global Walkability Index (Krambeck and Shah, 2006) determine attractiveness and convenience as one of the main indicators for pedestrian behaviour. Then, maintenance and cleanliness of walking paths, existence and quality of facilities for blind and disabled people, pedestrian amenities, permanent and temporary obstacles and availability of crossings are enumerated as main components (Krambeck and Shah, 2006). Those components have to include attention to vulnerable groups like people with disabilities, elderly people, parents with babies and young children. Similarly, Appleyard (1981:284) points out planting and maintenance for attractiveness. Street trees, planting strips as well as well-maintained structures along the streets would create a characteristic, then a sense of place (Appleyard, 1981: 270,271).

There are standards or minimum number of trees, also planting, to enrich urban plaza to be evaluate as a public space. Of course, numbers or standards should be revised according to social structure, needs, preferences or seasonal factors. Similarly, the width of sidewalks along streets and their capacity to be used as a public space is essential. Vertical circulation elements like building lobbies and interesting or attractive functions like libraries, museums, and art galleries shall be permitted to make public space in urban open space or near arcades. Furthermore, urban open spaces shall be illuminated throughout with an overall minimum average level (Whyte, 1980: 113).

In addition to facilities, Moughtin and Mertens (2003:132) state the role of activities or functions in a relation with users. There is a direct relation with the number of pedestrian, who use street in varying ways, and activities supporting facilities like shops, school or socio-cultural foci within walking distance. Furthermore, historic structures and axes make place attractive and authentic or unique for variety of people, those let place to identify, enjoy and feel places / cities (English Heritage, 2000: 51).

Jacobs (1995: 9) states that streets with positive impressions would be remembered. Attractive streets should include symbols of a community and its history to represent

public memory, so places for community. In addition to single or unique characteristics, variety or diversity of functions and structures could attract variety of people with different purposes (Jacobs, 1995: 297). Moreover, Jacobs (1995:285) presents the role of transparency for creating an interaction with different users along and the end of streets by means of public realms.

Another essential factor or policy to create an active street base on a 24-hour city with varying activities like living, working, shopping, schooling and socializing (Duany et al., 2010: 5.2). The diversity of functions and the density of users also enforce safety of the area. Duany et al. (2010:10.7) also underline attracting pedestrians with sidewalks and proper parking lots. Herein, Montgomery (1998: 96-100) determines the role of urban design and planning for transforming a place into a specific place with different activities and functions. Physical terms, the sense of experience and activities makes a successful urban place or vitality defined as pedestrian flow in 24-hours. Diversity of land use is seen as an attractive factor for public space and its impact zone. Whyte (1980: 51) believes food or generally gastronomic facilities have tremendous effects for gathering more people.

Consequently, attractiveness is an essential factor determining pedestrian behaviour by means of convenience of street network, pedestrian amenities and facilities, walking paths, planting, interesting urban landscape and especially diversity of activities and events.

Table 2.9. Indicators of attractiveness, key terms and variables

Indicators	Variables / Key Terms	References
Attractiveness	– Point of interest	Tuan, 2001: 161
	– Vitality and functions encourage citizens	Crankshaw, 2009
	– Maintenance and cleanliness of walking paths – Existence and quality of facilities for blind and disabled people, – Pedestrian amenities, – Availability of crossings	Krambeck and Shah, 2006
	– Planting and maintenance	Appleyard, 1981:284
	– Trees and planting – The width of sidewalks – Vertical circulation elements like building lobbies – Interesting or attractive functions like libraries, museums, and art galleries – Food or generally gastronomic facilities	Whyte, 1980: 113
	– The role of activities or functions – Historic structures and axes – Authentic or unique for variety of people	Moughtin and Mertens, 2003:132
	– Symbols of a community and its history to represent public memory – Single or unique characteristics, – Variety or diversity of functions and structures – Transparency for creating an interaction with different users	Jacobs, 1995: 9

Table 2.9: continued

Indicators	Variables / Key Terms	References
Attractiveness	– 24-hour city with varying activities like living, working, shopping, schooling and socializing – The diversity of functions and the density of users – Sidewalks and proper parking lots.	Duany et al., 2010
	– Physical terms, – The sense of experience and activities – Diversity of land use and pedestrian flow in 24-hours	Montgomery, 1998: 96-100

2.5.6 Cultural Preferences

As mentioned in approaches for pedestrian behaviour, Lefebvre (2017) underlines routines in daily life with different rhythms as cyclic or linear. Daily routines and time organization especially depends on cultural aspects. Socio-economical factor or cultural differences influence perception of physical elements of public spaces. Those factors will be life cycle, education level, occupation, and gender. Furthermore, personal experience in urban area, for example living in different-sized cities are effective on perception (Wohlwill and Kohn, 1973 cited in Nasar 1989: 50-51).

Tekeli (2010:9) claims that, the relationship between everyday life and the "place" on the one hand, is established on the other. Everyday life means nutrition, dressing, sheltering, sleeping, etc., which are generally included in the daily time budget of individuals in the society (Tekeli, 2010: 17). On the other hand, daily routines are not sufficient for making public space. Festival is out of everyday life. However, everyday life is not complete unless it focuses on festivity. Social relations that are normally present at a certain place and time with a festivity are changing, new forms of relationship are emerging, and a new social grading occurs (Tekeli, 2010: 9,10). Therefore, it is not about going through the activities of the individual, but speaking,

reading, moving, shopping etc. an approach that goes through life practices (ways of doing things) should be emphasized (Tekeli, 2010: 17).

As seen on aforementioned discussions in pedestrian behaviour, cultural preferences have significant effects on use of public space. Carmona et al (2008: 209) emphasize that there should be locally appropriate approaches for public space instead of being dogmatic and embracing pragmatic solutions for each case. Therefore, the analysis of public space would base on user perceptions of public space. They (2008: 210) asked the following questions;

- *What are people's aspirations for the quality of their local environment?*
- *Which aspects are important and which are less so?*
- *Does this vary from context to context and community to community?*

In fact, what users really want? will be key question for the management of public space. Carmona et al. (2008: 210) underline that measuring the expectations of people is a hard issue because of some qualities and features more difficult to understand than other features.

Professionals' and community's difficulties in expressing how they assessed levels of acceptability in local environmental quality meant that it was not possible to clearly define widely perceived perceptions of what was exactly quality. However, the majority of non-professional participants were able to identify the factors that affect their positive or negative feeling about their neighbourhood. In contrast, professional audiences found it difficult to do so, apparently, they often preferred to discuss the definitions of the dimensions of quality, not levels or quality, and choose to rely on user complaints rather than professional judgments to identify negative factors. In defined context, personal characteristics are affective in accordance with the quality of space in a hierarchy defined by expectations, needs and preferences together.

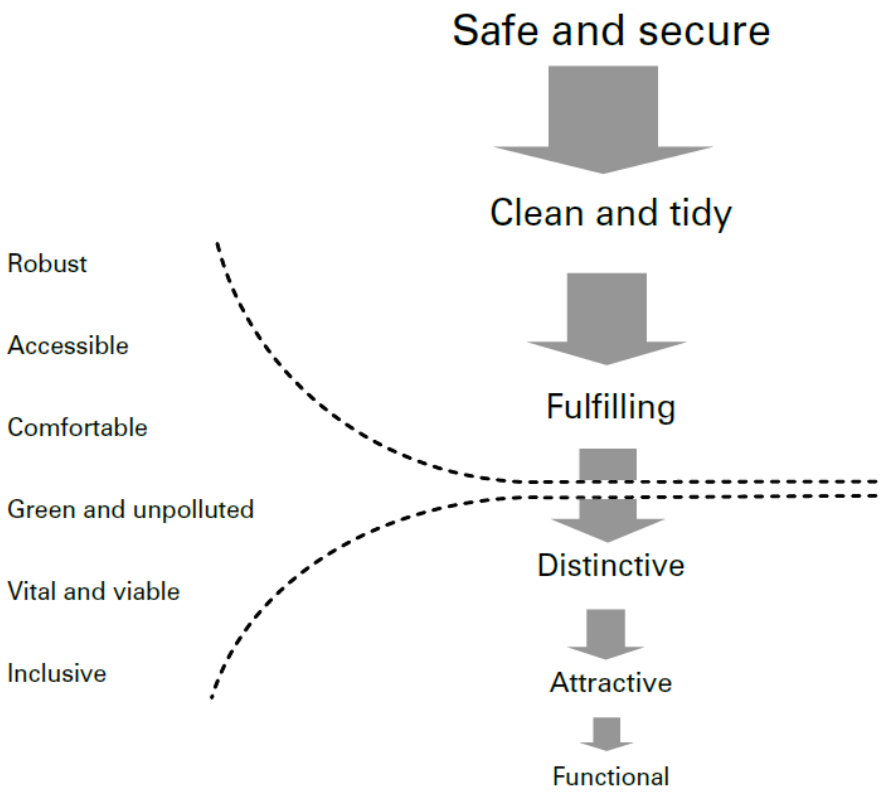


Figure 2.16. A hierarchy of universal positive qualities for public space (Carmona et al., 2008: 211)

Table 2.10. Indicators of cultural preferences, key terms and variables

Indicators	Variables / Key Terms	References
Cultural Preferences	– Rhythmanalysis / the analysis of cyclic and linear rhythms, clocks, days, waves, musical sounds, and body movements of people – Space, time and daily life – Ceremonies, festivals, carnivals, political ceremonies, commemorations or voting in public space	Lefebvre, 2017
	– Seasonal influences – Personal characteristics like gender, age, persons per household, education	Strohmeier, 2016
	– User perceptions of public space – People's aspirations for the quality of their local environment – Varying from context to context and community to community – What users really want? – Expectations, needs and preferences	Carmona et al., 2008

2.5.7 Time

Time factor is crucial determinant of pedestrian mobility in public space. Different hours in a day or different days of a week directly are effective on pedestrian behaviour. Weekdays usually interrelated with work and school travels, while weekends have recreational meanings. Furthermore, seasonal and climatic changes cause varying rhythms or cycles for pedestrians.

In addition to daily routines or cycles, Lyons (2011: 173) points out challenges for travel behaviours because of climate change concerns. There have been increasing discussion for healthier cities by means of active travel (walking or cycling) instead of sedentary or motorized traffic (sitting as a driver or passenger).

Similarly, according to Tuan (2001: 138) several features are necessary for sense of place are encapsulated in this brief account. Place is a pause in movement. In addition, sense of time has affected sense of place. Time factor is different for pedestrian movement.

Working hours or style, gender, the presence of dependent children in the household and other life cycle events are essential factors affecting perceptions of time pressures and time constraints (Goodwin, 1995 cited in Goodman and Tolley, 2003:76). These factors, of course, have influenced people's perceptions of time and whether they will consider walking as a mode of transport or not. Similar socio-cultural understandings of time are crucial for the decline in walking (Goodman and Tolley, 2003:76).

Consequently, Table 2.11 summarize the aspects of pedestrian behaviour and its measurable components defined by indicators.

Table 2.11. Indicators of pedestrian behaviour

ASPECT	INDICATORS
Safety *(Perceived safety)*	– Light – Feel
Safety *(Physical safety)*	– Light – Barriers – Traffic calming/Crossing from impact zone to case area
Aesthetic quality	– Attractive features (architectural design, building variety, vegetation, signage) – Aesthetical quality – perceptual innuendo, unexpectedness, whimsy, historical layering....
Connectivity	– Continuity to diverse activities – Length of segments – Legible paths
Comfort (Physical)	– Shelters – Trees – Human scale design – Topography and Slope – Climatic factors (sun, wind, rain, etc.) – Natural landscape and vista
Attractiveness	– Diversity of land use – Proximity to transfer points – Lightening – Barriers and obstacles
Cultural Preferences	– Personal characteristics
Time	– Hour, Day, Week, Season – Perception of time

In the next chapter, research method of the study is derived from literature review is going to be discussed by referring key measures of public space as mobility and pedestrian behaviour.

CHAPTER 3

RESEARCH METHOD

The chapter explains the method of research based on a case study approach. The method compromises two main sections as theoretical framework and case study. Theoretical research is completed on mobility and pedestrian behaviour in public space. Therefore, key determinants and measures of mobility and pedestrian behaviour are examined.

In the second part of research, those key determinants and measures are investigated in accordance with case study. Case study area, Mersin Coastal Park had been gradually filled step by step and used as a recreational area. Case study research bases on not only quantitative surveys, but also qualitative characteristics emphasizes publicness.

Deep literature review is made to determine indicators of main aspects of the role of pedestrian in making public space. Theoretical framework derived from literature review indicates that mobility and pedestrian behaviour has inner and outer elements. Therefore, first of all, the indicators of mobility and pedestrian behaviour are defined with defined context of inner and outer elements. In general terms, the concept of mobility is evaluated in terms of accessibility. Changing technology, socio-economic changes and / or changes in human perception create differences in urban mobility (Rode et al., 2015: 6). Accessibility, impact zone relations, recreation facilities, urban services and amenities are the main variables of urban mobility (Marshall, 2005; Herzele and Wiedeman, 2003; Strohmeier, 2016; and Kallerman, 2016). Safety, connectivity, comfort, attractiveness and aesthetics, cultural preferences and time are going to be evaluated as the indicators of pedestrian behaviour (Sisiopiku and Akin 2003; Kitazawa and Batty 2004; Gianluca et al., 2006; Kürkçüoğlu and Ocakçı, 2015;

Strohmeier, 2016; Mateo-Babiano and Ieda 2007). Details of indicators are described in the following section.

Primary and secondary sources are used in the study. Primary sources include fieldwork and observations, questionnaires and interviews. At that point, one of the most crucial features of the study, data gathering stages of the thesis are supported by TÜBİTAK-1002 (The Scientific and Technological Research Council of Turkey - Short Term Research and Development Funding Program) including funds for questionnaires and field studies by students, who are supported with scholarships.

Fieldworks include extensive and intensive surveys to understand inner organization and structural conditions of area. Extensive surveys let us to analyse main landmarks and functions, nodes, boundaries and spatial relations with impact zones. Moreover, landuse and physical entities of impact zone will be observed in detail. Intensive surveys are tools to enrich detailed direct observations and documentations of case area. Landscape, different functions and structures, pavement types, physical conditions and enlightening elements should be determined in case area.

In addition to physical and natural context of case area, social dimensions and users' patterns have to be evaluated to understand public realm. Therefore, user counts are another essential part of the method of study. User counts will be made within quantitative and qualitative aspects. The number of users in a specific period and pre-defined area, which may be sport facilities or decks, is just present a quantitative evaluation. However, the number of users with their duties or routines like walking, jogging or fishing will be used to understand and determine using patterns in case area. In other words, pedestrian behaviours and mobility have the meaning of whether an area has the character of public space. Not only the number of pedestrians in a field, but the frequency of use, periods of use, and the reasons for using space can reveal whether a space has gained public space or not.

Furthermore, questionnaires are tools to understand users' needs, expectations, using patterns and behaviours in case study area as pedestrians. Therefore, the questionnaire should include general questions of user profile, which are personal characteristics of

them, using pattern or routines in Mersin Coastal Park and the assessment of case area as a public space.

Moreover, local index will be used as another method to understand dynamics and especially preferences of users for a public space. Local index will be determined as expectations or factors effecting pedestrian decisions to prefer a public space or varying places in public space.

In addition to primary sources obtained mostly by TÜBİTAK-1002 fund, secondary sources will be helpful to understand historical development, design process and current planning statues. Therefore, these data will be got from Mersin Metropolitan Municipality, Akdeniz Municipality, Yenişehir Municipality, Provincial Directorate of Environment and Urbanization and other related institutions.

After data gathering, Geographical Information System (GIS) should be used to evaluate and analyse questionnaires, local index and field observations in spatial terms.

By use of all data, Mersin Case Study area will be analysed over sub-zones. The different sub-regions within the defined recreation area as a whole will be identified and compared. In addition to the comparison over the sub-zones, a comparison will also be made to understand the different patterns of use and reasons for the areas of similar functions.

Consequently, Figure 3.1 summarizes the method of thesis with different aspects of pedestrian behaviour and mobility, then defines case study and evaluation method. In the following section, first of all, the measures of key determinants are going to be studied in detail.

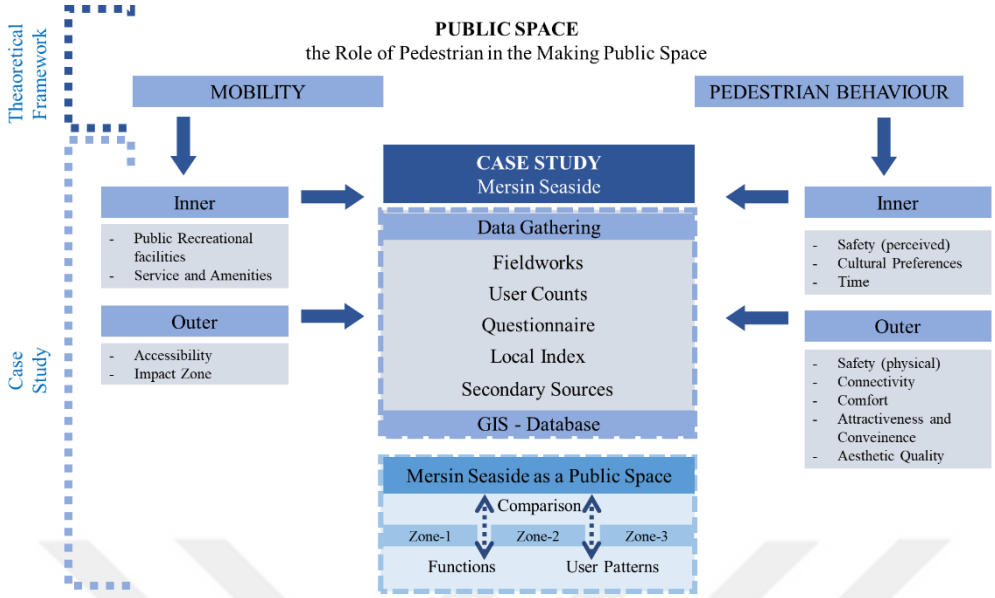


Figure 3.1. The Flowchart indicating the method of the study

3.1 Measures of Key Determinants

3.1.1 The indicators of mobility

According to literature review about, one of the main component of making public space is mobility and the indicators of mobility are determined as accessibility, relation with impact zone and public recreational facilities including services and amenities. When these indicators are evaluated in terms of spatial context, accessibility and impact zone are indicators out of public space. In other words, these indicators are independent from the main components of public space. On the other hand, recreational facilities including services and amenities are features of public space. Therefore, indicators of mobility are going to be examined as inner and outer factors.

In defined context, inner factors or indicators of mobility include public recreational facilities of public space. Service amenities, equipment rental stands, sports stands/seating, picnic tables, water fountains, restrooms, vending machines, trash bins and so on would be enumerated as public recreational facilities. Moreover, according to location and number of those facilities, the availability of them should be another

significant factor determine mobility of public recreational facilities. Those types of datasets will be obtained from detailed base maps of related local authorities, which are responsible for constructing and maintaining such areas. In addition to base maps, detailed field works including photographing and measuring will be a primary source to update the conditions of facilities for evaluating the mobility of public space. Table 3.1 presents the indicators of public recreational facilities and service-amenities referring to primary and secondary datasets.

Table 3.1. : The inner factors / indicators of mobility and probable primary and secondary data sources

ASPECT	INDICATORS	PRIMARY SOURCES	SECONDARY SOURCES
Public Recreational facilities	– Availability of facilities (indoor fitness facility, Park, Playground, Outdoor pool, Beach, Sports playing field, basketball court, tennis court (park or school), Marina – Availability of equipment (playground equipment, sports equipment, etc.)	– Field works	– Meteorological data – Base maps
Service and Amenities	– Equipment rental stand – Sports stands/seating – Picnic tables – Water fountains – Restrooms – Vending machines – Trash bins	– Field works	

On the other hand, the accessibility of public space and impact zone, where has a direct relation with pedestrian movement, are outer factors or indicators determining mobility of public space. According to researches and main discussions in literature review, availability to alternative transportation modes, features of sidewalks, bike lanes, parking, orientation and public transport are components of accessibility of public space. Data about accessibility will be obtained with field studies. Moreover, efficiency and effectiveness of components of accessibility will be evaluated by

questionnaires base on pedestrians' needs and expectations. In a general viewpoint, accessibility defines the relation of public space with whole city or a district. On the other hand, public space has direct relation with some areas, where pedestrian easily access to public space, determine publicness of public space. Therefore, land use, diversity and linkage are components of impact zone that affect public space.

Table 3.2 summarizes the indicators of accessibility and impact zones. Field works, questionnaires and cognitive maps are primary sources for the mobility of public space. In addition to them, development plans, reports, base maps and planning analysis will be used as secondary sources.

Table 3.2. : The outer factors / indicators of mobility and probable primary and secondary data sources

ASPECT	INDICATORS	PRIMARY SOURCES	SECONDARY SOURCES
Accessibility	– Availability to alternative transportation modes – Presence, location, continuity and obstruction of sidewalks – Sidewalk width and condition – Presence, location continuity and obstruction of bike lane, condition of bike lane – Parking and on street parking – Orientation – Public transport	– Field works – Questionnaire	
Impact zone	– Land use (mixed used commercial+residential, public places) – Diversity – Linkage between impact zone to case area	– Field works – Cognitive maps	– Development plans, reports – Base maps and planning analysis of the Municipalities

3.1.2 The indicators of pedestrian behaviour

The indicators of pedestrian behaviour are determined as safety, aesthetic quality, connectivity, comfort, attractiveness, personal characteristics and time. Similar to spatial discussion in mobility, the indicators of pedestrian behaviour should be evaluated as inner and outer indicators. Inner indicators mean personal characteristics or choices of pedestrians those determine attitudes, behaviours or acts in public space. On the other hand, outer factors could be easily defined as factors affecting their behaviours in public space. Therefore, indicators of pedestrian behaviour are going to be examined as inner and outer factors, too. In defined context, perceived safety, cultural preferences and time are inner features of pedestrian behaviour, and then physical safety, connectivity, comfort, attractiveness and aesthetical quality are outer factors affecting pedestrian behaviour.

Table 3.3 and Table 3.4 summarize primary and secondary sources or datasets determining pedestrian behaviour. Main primary sources are questionnaires and field works. Moreover, cognitive maps will be used to get users' perception in case area. In addition to primary ones, demographic data and meteorological reports are secondary datasets.

Table 3.3. : The inner factors / indicators of pedestrian behaviour and probable primary and secondary data sources

ASPECT	INDICATORS	PRIMARY SOURCES	SECONDARY SOURCES
Safety *(Perceived safety)*	– Light – Feel	– Questionnaire	
Cultural Preferences	– Personal characteristics	– Field works – Questionnaire	– Neighbourhood population
Time	– Hour, Day, Week, Season – Perception of time	– Field works – Questionnaire	

Table 3.4. : The outer factors / indicators of pedestrian behaviour and probable primary and secondary data sources

ASPECT	INDICATORS	PRIMARY SOURCES	SECONDARY SOURCES
Safety *(Physical safety)*	– Light – Barriers – Traffic calming/Crossing from impact zone to case area	– Field works	
Connectivity	– Continuity to diverse activities – Length of segments – Legible paths	– Field works	
Comfort (Physical)	– Shelters – Trees – Human scale design – Topography and Slope – Climatic factors (sun, wind, rain, etc.) – Natural landscape and vista	– Field works – Questionnaire	– Meteorological data – Base maps
Attractiveness	– Diversity of land use – Proximity to transfer points – Lightening – Barriers and obstacles	– Field works – Questionnaire – Cognitive maps	– Development plans – Aerial photographs and Satellite image – Projects
Aesthetic quality	– Attractive features (architectural design, building variety, vegetation, signage) – perceptual innuendo, unexpectedness, whimsy, historical layering....	– Field works – Cognitive maps	

In the following sections of the chapter, data gathering processes mainly primary data and analysis tools are described in detail. Fieldworks, user counts, questionnaire, local index and datasets obtained from related institutions are main data gathering methods.

3.2 Data Gathering

In the scope of study, two sets of data are gathered to describe basic features of case study area and evaluate main components of public space in terms of mobility and pedestrian behaviour. The study, as a doctoral dissertation, is mainly based on primary sources. The secondary sets of data are used as base for research or institutional data for supporting discussions. In defined context, fieldworks including extensive and intensive investigations, user counts, questionnaires and cognitive mapping are methods as primary sources of the study.

As mentioned above, field studies, processing datasets and visual analysis are completed with the support of TÜBİTAK-1002 (The Scientific and Technological Research Council of Turkey - Short Term Research and Development Funding Program). The details of process are defined in the following sessions.

3.2.1 Fieldworks

The first source of evidence is the extensive survey (which is carried out) to determine the boundaries of Mersin sea-side. The second source of evidence is extensive survey is made to define sub-zones in the case study area. After that, more detailed and comprehensive field studies are carried out in case study area. Detailed fieldworks briefly could be divided into three sets as determining physical-built environment, user counts and land use in both case study area and impact zone.

The boundaries of case study area are defined according to natural features as sea and river and main avenues in a relation with impact zone by extensive fieldworks. After that, the sub-zones are determined according to characteristics of seaside and main functions in impact zone. The sub zones will be helpful and meaningful to understand significant and essential similarities or differences in case study area that is belong to public and open to whole citizens. However, there are different zones according to using patterns and habits in case study area. At that point, one critical issue should be care of that, overall design and landscape of case study area had been renovated and reconstructed in the last two years. Therefore, at the beginning, ongoing construction

sides were excluded from the scope of study. However, whole construction works had been completed while ongoing field studies.

Land use maps are essential to identify functions and spatial distribution of these functions near the coast, as well as determinations for daily uses like sports, walking or dining in the Mersin Coastal Park, which is mostly arranged as a light green area. Land-use study will be divided into two groups. The first one is land-use of impact zones including residential, commercial and administrative uses. Land use and different functions are going to be examined in terms of creating pedestrian movement or not. Functions at ground, the first and upper floors will be examined in detail to understand their potential for being foci for pedestrians or vice versa. Mainly ground floor is evaluated because of direct visual and physical relations with pedestrians. For example, cafes, bookstores or some gastronomic facilities will have potential than ordinary commercial activities. On the other hand, residential areas have potential for daily uses of recreational areas with various age groups, especially for young and older groups. In addition to functions of buildings, use of open spaces and green areas are crucial to set an impact with case study area.

The second land-use study is necessary or case study area to understand character zones or sub-zones. In the area, there are sports fields, walking and jogging trails, bicycle paths, playgrounds, seating areas and pergolas, rigid floor arrangements (skateboarding, alternative sports), scaffolding and different landscaping arrangements. There are also service areas at some points, such as social facilities and cafes built on different dates.

Lastly, in the sub-regions, detailed observation, counting and determination are made on existing physical built environment, user types and activities. In addition to visual investigations, detailed photographs are shoot in the area for guiding the survey study and identifying sub-work zones. Details of user count are discussed in the following session.

3.2.2 User Counts

User counts are essential determinants of making public space in accordance with the density of use (Whyte, 1980: 73). The counts will indicate the characteristics of public space by means of quantitative terms like number of user, type of users (pedestrian counts). Therefore, changes in hours of day, in a week and in a year (seasonal changes) are significant to evaluate public space.

Change in a day will be basically distinguished as morning, afternoon and evening counts. Especially early morning hours like 06:00-08:00 are appropriate for sporting activities in recreational area. Moreover, following hours will be discussed within home-work or home-school movements. Similarly, daybreaks or lunch hours between approximately 11:30-13:30 should be evaluated as another peak hour in recreational areas. On the other hand, evening hours or other times may be attractive for families or child-care activities. The evaluation of user counts within different hours let us to understand daily routines and rhythms in recreational area.

Another dimension of user counts is change in different days of a week, or especially change in weekdays and weekends. Because of working hours or school days, weekend's profile should be different from weekdays even in same hours. Furthermore, seasonal changes in a year is directly related with user routines that are directly affected by weather conditions.

In the study, because of limitations in time and personal, changes in a year or seasonal changes could not be evaluated by user counts. However, changes in a day and weekdays or weekends are investigated in detail. User counts include main activities of users sports, dining or waterfront activities like fishing. Moreover, user counts are visualized and spatialized by GIS as two different models of coastal area. The first one indicates each user as a dot / point in different periods, so user densities are visually and spatially represented. The second one indicates some foci presented as different sizes of circles that are determined according to number of total users in a day.

In addition to number of users, activity based user profiles will be helpful to understand the distribution of users and its logic. For example, in case study area, seaside activities like fishing, sporting activities like jogging or walking or using open spaces define parallel corridors along seaside, details are going to be discussed in Chapter 4. As mentioned above, the user counts are completed by students who had scholarship from TUBİTAK-1002 project.

User counts during citrus festival, national holidays, folk concerts, etc. activities have been ignored due to the instantaneous intensities. However, the use and suitability of such activities in the study areas was further assessed.

3.2.3 Questionnaire

The questionnaire is mainly a study to determine the user profile and preferences. The questionnaire in the study consists of three main chapters: A. Questions on User Profile, B. Questions on the Use of Mersin Coastal Park and C. Public Space Assessment. Different alternative queries and cross tables will indicate the relation between users' profiles and their attitudes of behaviours in public space.

Two sets of questionnaire are completed for the study. The first one was completed in November 2018 and could be seen as a trial study to evaluate the spatial distribution of users and their characteristics. Approximately one thousand (1000) questionnaires were made in Zone-1 and Zone-2. Zone-3 is excluded because of ongoing construction works in area. The boundaries and construction works are determined in the following chapter. For the questionnaire, sample size was determined according to 1,005,455 people in urban areas of the Akdeniz, Yenişehir, Toroslar and Mezitli Districts of the central districts of Mersin and approximately 0.1% sample size. The questionnaires were divided into two groups as weekday and weekend and different hours in days. Pool persons are randomly selected by the interviewers. In addition to sub-zones, the surveyors will be asked to mark the point on base maps at which the questionnaire was made. So, the spatial distribution of users could be obtained. Then, the results of questionnaires are linked with spatial distribution of users by means of GIS. However, because of issues in field, the results of questionnaires are not trustable in terms of

spatial distribution of users. However, this set of data is crucial to evaluate user's profiles and characteristics of case study area is Fall 2018. In addition to questionnaires in Fall 2018, a set of cognitive maps were obtained by a sketch problem for the third year students of Department of Architecture, Mersin University. Those cognitive maps will be helpful to evaluate the relation with impact zone and mainly attractive foci in Zone-1 and Zone-2.

The second set of questionnaire was completed in August 2019. Pool persons are again randomly selected by the interviewers. However, considering the size and time factor of the sample study area, it is made in different numbers according preliminary user counts (Table 3.5). The questionnaires are divided into 3 groups as weekday, Saturdays and Sundays. In Mersin, users' profiles in the coast will be different in weekend because of the number of private firm, where there are working hours in Saturdays. In addition, in order to observe the changes in the user profile, the surveys are conducted in the time intervals of Morning (06:00-08:30), Mid-day (12:00/14:00) and Evening (18:00-21:00). The remaining hours are excluded because of low number of users and weather conditions in summer. For the questionnaire, sample size was determined according to 1,005,455 people in urban areas of the Akdeniz, Yenişehir, Toroslar and Mezitli Districts of the central districts of Mersin and 2000 questionnaires are made considering approximately 0.2% sample size.

Table 3.5. : The number of questionnaires in Sub-zones that are determined according to preliminary investigations

	Weekdays			**Saturday**			**Sunday**			
	Morning (06:00-08:30)	Mid-day (12:00-14:00)	Evening (18:00-21:00)	Morning (06:00-08:30)	Mid-day (12:00-14:00)	Evening (18:00-21:00)	Morning (06:00-08:30)	Mid-day (12:00-14:00)	Evening (18:00-21:00)	
Zone-1	60	40	100	60	40	120	60	40	180	**700**
Zone-2	60	40	100	60	40	120	60	40	180	**700**
Zone-3	60	40	80	60	40	100	60	40	120	**600**
										2000

Two sets of questionnaire consist of closed-ended questions. According to the answers to the closed-ended questions, descriptive, cross and frequency tables are prepared in SPSS program and Ms Office Excel. Likewise, by using Likert scale technique, evaluations are made to compare sub-regions. In the comparison, the answers of the questionnaire questions about the public space assessment are scored between 1-4 and the negative percentage with the highest percentage will be scored as 1, the negative percentage with the lowest percentage will be 4, and the percentages will be scored as 2 and 3 according to the low to the highest.

The following tables summarize the questions in accordance with the components of making public space as mobility and pedestrian behaviour.

Table 3.6. : Questions according to inner indicators of mobility

ASPECT	INDICATORS	Questions in Questionnaire Forms
Recreational facilities	– Availability of facilities – Availability of equipment	**17.** Whether there are enough benches and resting places on the coast **30.** Whether there are sufficient gastronomic facilities on the coast
Services and amenities	– Service amenities – Equipment rental stand – Sports stands/seating – Picnic tables – Water fountains – Restrooms – Vending machines – Trash bins	**18.** Whether the locations of benches in the coast are well chosen **19.** Whether there are enough pedestrian amenities and facilities (Public toilets-water) **21.** Whether night lighting is sufficient in the case study area

Table 3.7. : Questions according to outer indicators of mobility

ASPECT	INDICATORS	Questions in Questionnaire Forms
Accessibility	– Availability to alternative transportation modes – Presence, location, continuity and obstruction of sidewalks – Sidewalk width and condition – Presence, location continuity and obstruction of bike lane, condition of bike lane – Parking and on street parking – Orientation – Public transport	**12.** Which transportation modes you use to coming to the case study area ****12a.*** If you come by private car, where do you park your car? Whether there are enough parking areas for vehicles in case study area **22.** Whether bicycle paths along the coast are sufficient **23.** The coast is easy to reach as pedestrian. **24.** Pedestrian paths along the coast are safe for the elderly, disabled, children, parents with infants and young children. **25.** There are adequate arrangements (ramps, special flooring, etc.) for the disabled on the coastal line. **26.** The coast is easy to reach by public transport. **27.** The coast is easy to reach by private cars. **28.** The pedestrian crossings on Adnan Menderes Boulevard are easily accessible to reach the coast.

Table 3.8. Questions according to inner indicators of pedestrian behaviour.

ASPECT	INDICATORS	Questions in Questionnaire Forms
Safety *(Perceived safety)*	– Light – Feel	**21.** Whether night lighting is sufficient in the case study area **29.** I feel safe on the Coast
Cultural Preferences	– Personal characteristics – Crowding and noise – Other pedestrians' movements	**1.** Gender **2.** Age **3.** Education **4.** Occupation **5a.** Number of households / **5b.** Number of people working in the household **6.** Average household income (total monthly TL) **7.**Where Do You Live in Mersin? **8a.** Type of Residence / **8b.** Ownership **9a.** How long have you lived in Mersin / **9b**. Where did you come from Mersin? **16.** Who do you come to the Coast with?
Time	– Hour, Day, Week, Season – Perception of time	**10.** How often do you come to Mersin Coast? **11.** How much time do you spend in Mersin Coast? **13.** What are your preferred time to come to the Coast (Seasons / Day / Time)

Table 3.9. Questions according to outer indicators of pedestrian behaviour.

ASPECT	INDICATORS	Questions in Questionnaire Forms
Safety *(Physical safety)*	– Light – Feel	**21.** Whether night lighting is sufficient in the case study area **29.** I feel safe on the Coast
Comfort ***(Environmental)***	– Shelters – Trees – Human scale design – Topography and Slope – Climatic factors (sun, wind, rain, etc.) – Natural landscape and vista	**13.** What are your preferred time to come to the Coast (Seasons / Day / Time) **31.** The Coast is sufficiently shaded. **32.** I have access to the sea along the Coast.
Attractiveness	– Diversity of land use – Proximity to transfer points – Lightening – Barriers and obstacles	**14** For what purpose do you usually use the Mersin Coast? **15.**What are the areas you prefer to use in the Coast? **20**. I prefer to use the Coast because the open green area and public space in my neighbourhood are insufficient. **33**. I prefer the Coast because it is close to the sea.
Aesthetic quality	– Attractive features (architectural design, building variety, vegetation, signage) – perceptual innuendo, unexpectedness, whimsy, historical layering....	**32.** I have access to the sea along the Coast. **33**. I prefer the Coast because it is close to the sea. **34.** I think the Coast is being used efficiently

3.2.4 Local Index

In addition to questionnaires, short-interviews (Appendix-A) are made with users to evaluate and rank their expectations, needs and preferences for public space and to understand local pedestrian index for Mersin Coastal Park. According to total grades (1-5) of each aspect, average result indicates a local index.

Local index will be presented as a histogram that Is an accurate representation of the distribution of numerical data from interviews. In that presentation standard deviation is crucial because of understanding radical changes bases on varying expectations of different user profiles. For example, some facilities like skateboarding area are more attractive for younger groups rather than benches or picnic tables. Therefore, a set of questions will be used to understand the relations between user expectations and recreational area facilities.

In defined context, in addition to standard deviation, average of whole grades is another interesting data to compare different parameters to each other. Parameters or aspects above average will be more critical factors in case study area. Therefore, local factors affecting user profiles and daily routines will be discussed in detail.

3.2.5 Secondary Sources

Documental search and data collection, secondary sources were obtained from relevant institutions and organizations that the Metropolitan Municipality of Mersin and the District Municipalities of Yenişehir. Then, Geographical Information Systems has been established for case area with base maps. In addition, the current satellite images of area are linked to the online spatial data services by using GIS desktop software (QGIS) to obtain possible high-resolution images with OGC WMS, WMTS, WCS protocols.

In addition to base maps, land use in impact zone and special features of Mersin Coastal Park are studies as different layers in GIS. Furthermore, user counting and preliminary results of first set of questionnaires are spatialized in GIS.

Geographical Information System are used for the spatial evaluation of questionnaires and field observations obtained within the scope of study. Overlay / buffer zone analysis are carried out to examine the effect of interesting activity centres (playground, seating areas, and pier) or unwanted uses (garbage collection area, storage areas, electric box, etc.) on their near surroundings. The results of the survey are being marked as approximate point to GIS. In addition, the counts made in different time periods are spatialized. In this way, user numbers, profiles and groups could be monitored as spatial distribution.

In conclusion, by evaluating the data to be obtained within the scope of the study, it is possible to focus functions in surrounding area of the Mersin Coastal Park, whether it is limited or interacting with the surrounding areas. Sub-regions are identified and detailed analysis are conducted.

3.3 The Evaluation / Analysis of Making Public Space

The evaluation of the role of pedestrian in making public space is main theme of the study. Therefore, we have to answer question of how can we determine a public space? Does the ownership of an area belong to the public make it a public space? Or Are just public functions like school or park sufficient to make public space? In other words, what are the essential aspects of making public space for planning and urban design? As mentioned above, there are different factors affecting public space. In the study, mobility and pedestrian behaviours are seen main factors with inner and outer components for making public space. As Gehl (2010) states there are three main groups for open-area activities, so use of public space. Walking, dining, waiting or shopping for working, education or childcare are defined as necessary activities. Walking, looking, sitting or running are optional activities requiring appropriate time and place means under good conditions. Then, the last group of activities is social and cultural activities with other people. These outdoor activities have variety on space and time but basically could be evaluated within public space. As Gehl (1987, 2010) emphasize, the quality of environment has significant impact on optional and social activities.

In defined context, the number of users is one of the main indicators of making public space. There are varying factors of pedestrian behaviour and mobility for making public space. In addition to number of users, frequency, periods and reason of uses with types of users determine the pattern of uses and users indicating a place is whether a public pace or not. Consequently, in the study, the level of factors in making public space is evaluated with inner and outer determinants of pedestrian behaviours and mobility (Table 3.10 and Figure 3.2).

Table 3.10. : The level of factors through making public space

	Mobility	**Pedestrian Behaviour**
Inner Factors	*Recreational facilities* *Services and amenities*	*Safety (perceived)* *Personal Characteristics* *Time*
Outer Factors	*Impact Zone* *Accessibility*	*Safety (physical)* *Attractiveness and Convenience* *Connectivity* *Comfort* *Aesthetic quality*

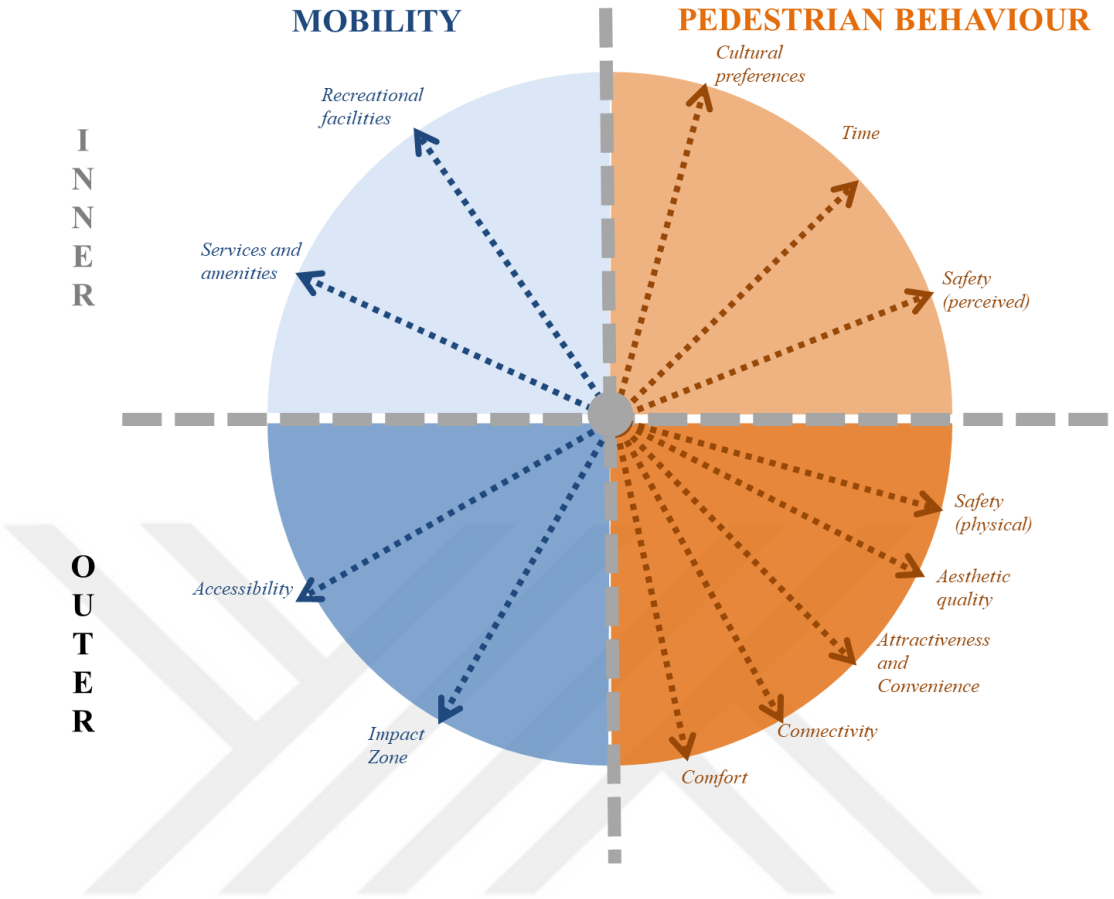


Figure 3.2. Inner and outer indicators of mobility and pedestrian behaviour through making public space

As mentioned above, Mersin Coastal Park, which had been obtained by filling sea and have been used as road and recreation area approximately 9km distance from Mezitli Stream at the west to historic city centre and Atatürk Park at the east. In Mersin Coastal Park area, historic city centre and Atatürk Park has different dynamics and characteristics than the western part of Coastal Park from the Hilton Hotel to Mezitli Stream, which including different functions inside and impact zone. Therefore, the scope of study is limited from the Hilton Hotel to Mezitli Stream. Mersin Coastal Park is a linear public space including different recreative and social activities. Moreover, the ownership of whole side is belonging to public out of some indoor facilities are operated by local authority. However, usage patterns in Mersin Coastal Park is different according to number of users and their frequency, characteristics of users and

activities in case area. Therefore, the study aims to compare different zones in case area by means of inner and outer determinants of pedestrian behaviours and mobility to understand characteristics of case area to develop planning and urban design strategies for making public space.

In defined context, two types of comparison are going to be made. First one base on spatial boundaries that are determined by focal or breaking points and second comparison based on similar functions like sports areas, the ports, playgrounds or waterfronts. According to extensive surveys in case area, coast from Mezitli Stream to Yenişehir Campus of Mersin University is determined as Zone-1, area from the Campus to the eastern boundary of Marina, where is known as Göçmen Kavşağı, is determined as Zone-2 and the rest of Coastal Park till to Hilton Hotel is determined as Zone-3. Actually, Zone-3 is larger than other zones. Because, at the beginning of research there were construction works in Zone-3. Todays, the most of coast is open to public without any limitations. Table 3.11 presents a basic guide or matrix for comparison of each zone with each other. Because of qualitative determinants, comparison is going to made better, neutral and worsen than other zones with different annotations for Likert Scale.

Table 3.11. : Comparison matric for Zones according to the determinants of mobility and pedestrian behaviour

			Zone 1	Zone 2	Zone 3a
MOBILITY	**Inner**	*Recreational facilities*			
		Services and amenities			
	Outer	*Impact zone*			
		Accessibility			
PEDESTRIAN BEHAVIOUR	**Inner**	*Safety (perceived)*			
		Personal characteristics			
		Time			
	Outer	*Safety (physical)*			
		Attractiveness			
		Connectivity			
		Comfort			
		Aesthetic quality			

As mentioned above, after comparison of Zones, sub-detailed study zones are going to be determined according to the distribution of main types of activities. In that stage, the comparison of sub-zones with the determinants of mobility and pedestrian behaviour is supported with user counts and user characteristics.

CHAPTER 4

MERSİN COASTAL PARK, HISTORICAL DEVELOPMENT AND ITS SPATIAL CONTEXT

In this chapter, Mersin Coastal Park, the Case Study Area, is introduced by its historical development and spatial context. First of all, historical development of Mersin Coastal Park is evaluated by means of planning strategies and urban development pressure on agricultural lands. Then, the formation and development of the case study area by filling operations in Coastal Park let to have a large-scale recreational area along the Coastal Park. After that, spatial context of the case study area is examined with conceptual diagrams, aerial views and photographs. In this section, 3 sub-zones are defined for following evaluations in the case study area. Finally, users' preferences in Mersin Coastal Park is evaluated and determined to get a local index for expectations, needs and priorities of users in the case study area.

4.1 Historical Development of Mersin Coastal Park

During the history, the Province of Mersin has included the most important settlements of ancient Cilicia, with its proximity to important trade and caravan routes, and its geographical location, which was a safe inner harbours (Sayar, 2004: 9-11 cited in the MMM, 2018). In its geographical context, because of changing coastline by alluvial flows, Mersin, which has been an important trade city in Turkey, emerged in the 19th century, when new world economy and urban dynamics caused significant impacts on the port cities, and has been integrated into the Mediterranean World (Adıyeke and Adıyeke, 2004: 69). During the 19th century, small fishing town transformed into a cosmopolitan city by means of agricultural production and port facilities. Moreover, the population had been increased by migrations from different geographies and the

boundaries of city reached to Müftü River at west and the Station at east with approximately 300ha area (The MMM, 2018: 8). As Beyhan and Uğuz state that socio-spatial characteristics of the Eastern Mediterranean port cities like the forms of residential districts, religious buildings, schools and domestic architecture could be followed in Mersin as the outcomes of cosmopolitan culture.

At the same time, transportation infrastructure has been developed; Mersin-Adana constructed in 1873, the railway between Mersin-Adana constructed in 1886 and the road between Mersin-Silifke-Mut-Karaman constructed in the beginning of the 20th century. In defined context, the macroform of the City was determined by neighbourhoods settled around the port and railway station. Because of climatic conditions, the development through western axes continued with north-south directed axes during the beginning of the 20th century (Belge, 2012: 78-79). After the Turkish War of Independence, Rums migrated from Mersin and Turks from Thessaloniki and Crete settled around Mersin as an essential change in social structure (Adıyeke and Adıyeke, 2004: 79). Yenişehirlioğlu et al. (1995: 21 cited in Belge, 2012: 82) states that the development of Mersin during unplanned period would be formed by Ebniye Nizamnameleri, which were the regulations determined by the Ottoman Empire to control urban development.

In 1938, the first plan of Mersin was prepared by Herman Jansen, Walther Bangert and Walter Moest. In addition to general characteristics of Jansen's Plan like the approach of Garden City, the plan emphasized the role of city as a port city. The plan enhanced the relation between city and sea by green corridors and coast arrangement like well-designated promenades along the coastline. Moreover, a natural beach was planned at the west side of Müftü River (Figure 4.1 and 4.2). The plan aimed to conserve natural relation between the coast and the city.

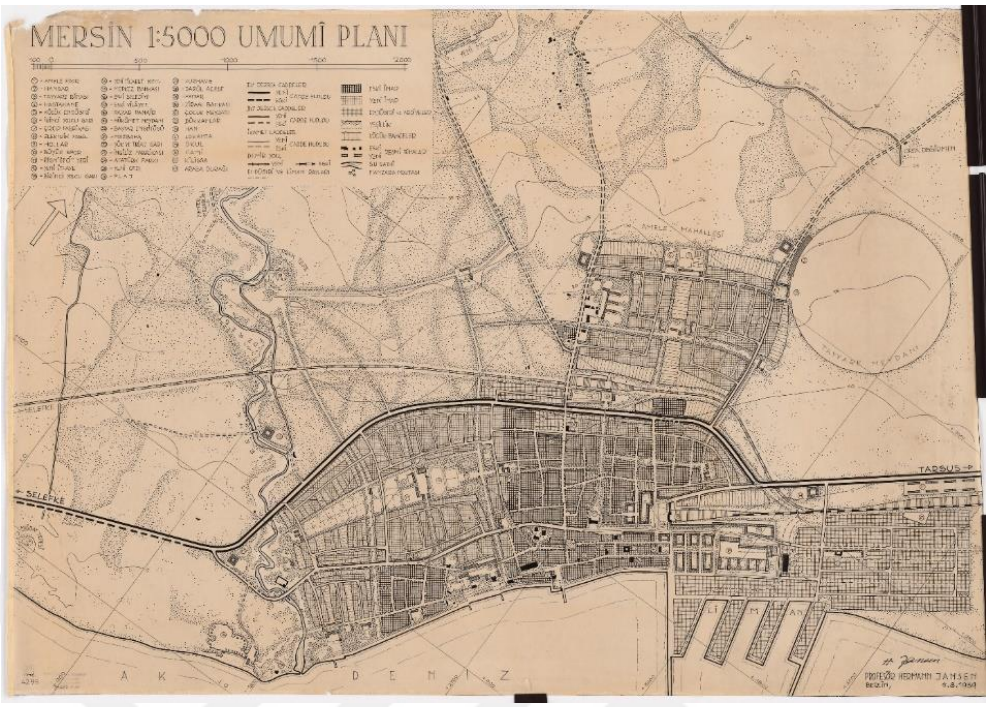


Figure 4.1. Hermann Jansen Plan (Jansen et al 1938, TU Berlin Architekturmuseum, Inv. Nr; 23455)

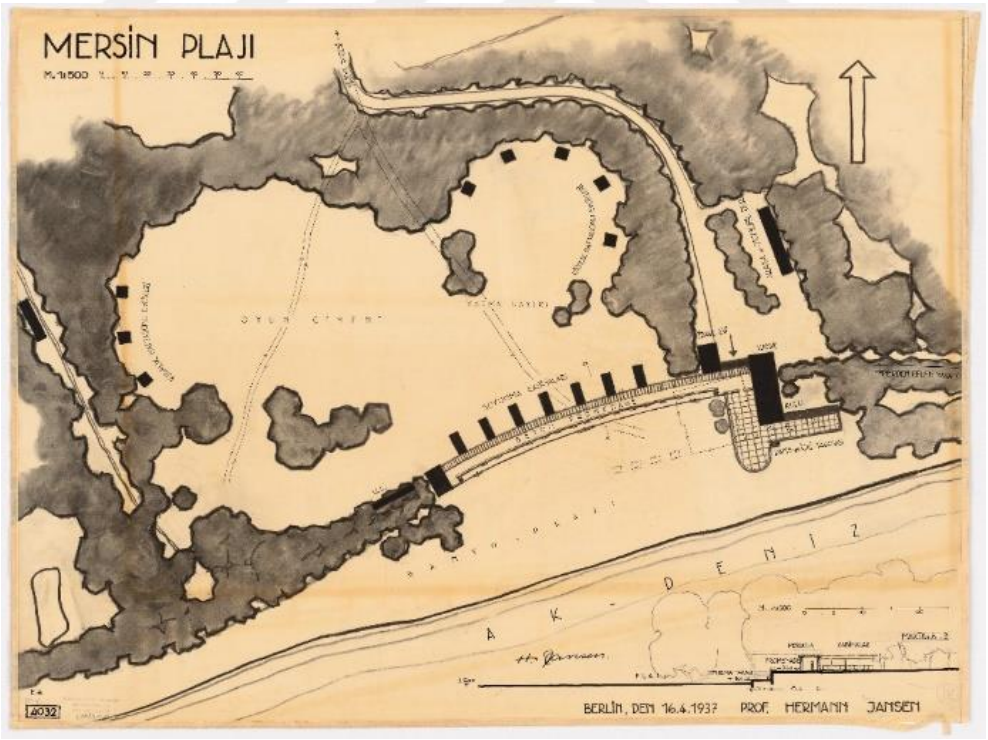


Figure 4.2. Beach Design and Promenades (Jansen et al 1938, TU Berlin Architekturmuseum, Inv. Nr; 23453)

In 1950s, the population of Mersin reached approximately 36.000 within 500ha area. The city had been developed to the western side with north-south directed axes (The MMM, 2018). Following the Jansen plan, the plan prepared by the Bank of Provinces (İller Bankası), which came into force in 1963, intensified the city and triggered a transformation from agricultural parcels to urban blocks due to the standards stipulated in legal regulations in 1956 (The Act No: 6785). The plan foresees development in the west and north directions, where the first degree / quality agricultural lands of the city are located (Akçura, 1981 cited in The MMM, 2018: 12).

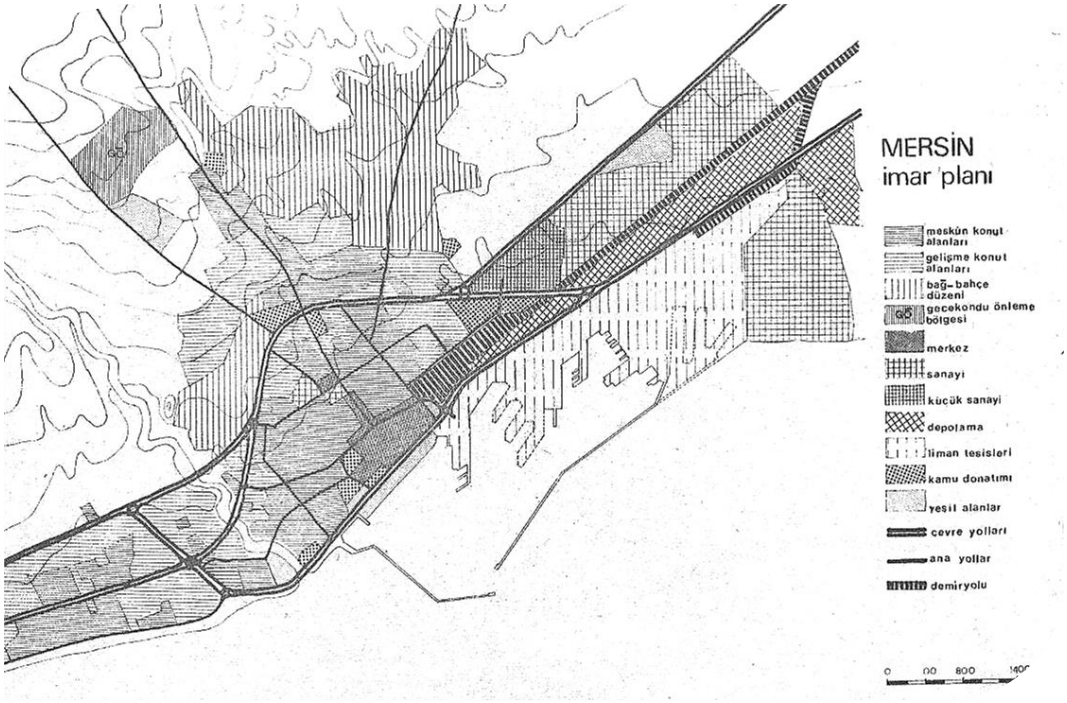


Figure 4.3. İller Bankası Planı, Mersin, 1964 (The MMM, 2018: 12)

In sum, the plan prepared by the Bank of Provinces (İller Bankası) was the first comprehensive plan of the city. This plan decided about two crucial factors affecting the macroform of Mersin: first, the functions relating with the Port, and second, Ring Road around the city. The plan that prepared by the Bank of Provinces was revised in 1976 (Figure 4.4. and 4.5.), but revised decisions could not control urban development along the western corridor (Belge, 2012: 83).

Figure 4.4. Aerial view of Mersin in 1970s (Vanlı,1977: 128-9)

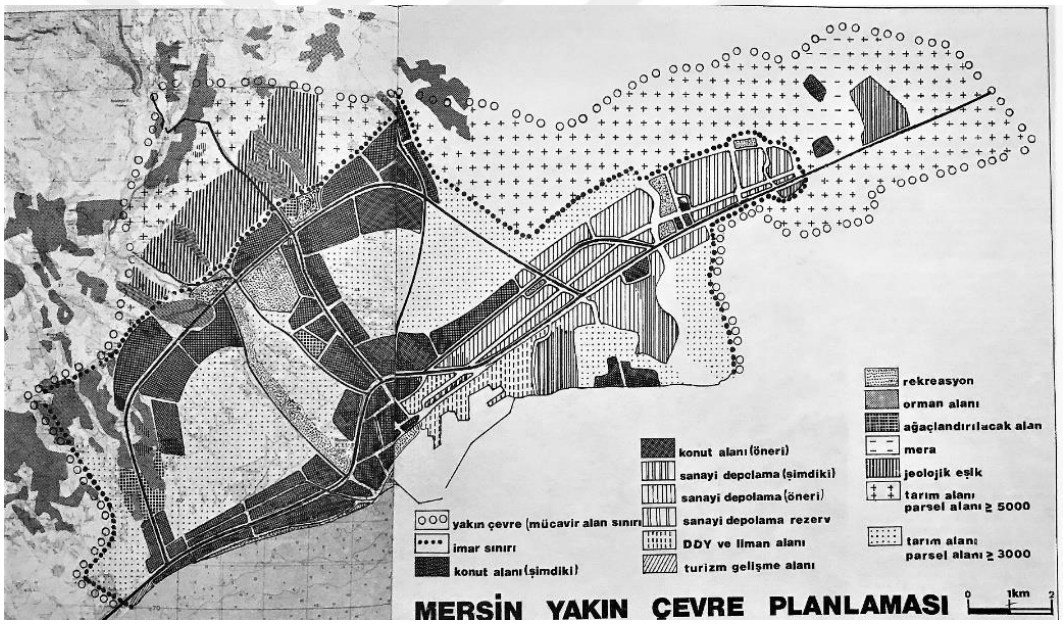


Figure 4.5. The City of Mersin, Master Plan Schema 1975-1976 (Vanlı,1977: 136-7)

In 1980, the Ministry of Urban Development and the Municipality of Mersin co-operated to prepare urban environmental development plan in 1/25.000 scale (Özgür, 1987 cited in Hisarlı, 1988: 31). The plan aimed to block east-west linear development and let to development through northern site of Mersin. Moreover, enhancement of

relation with sea and development of the second business district at the west of Müftü River were the main objectives of the Plan. However, that plan could not control or guide the rapid urbanization dynamics of Mersin, either. The population in 1983 exceeded the projections of the 2000s (Özgür, 1987, cited in Hisarlı, 1988: 32). In addition to aforementioned plan, a new 1/5000 scale Master Plan was approved in 1982. However, because of legal regulations let to supervision of local authorities on planning process, a large number of plans were prepared in different scales (Adıyeke, 2004).

Between 1985-2000, it is seen as the first period in which population increase and demographic changes were experienced intensively in Mersin. During this period, the total population of the city had increased by around 600.000 people and the population of the city has almost doubled. The reason for this rapid growth is that Mersin received intensive migration from the surrounding provinces, especially in the Eastern and South-eastern Anatolia Regions (The MMM, 2018: 9).

In 1996, 1/5000 scaled Master Plan, which was comprehensively revised, included decisions supporting ongoing works for 35-meter sea-side boulevard and recreation areas would be obtained by infilling the sea. Moreover, the Marine was indicated on the Plan. The plan suggested a larger infill area for recreational facilities at the western side the Marine. In the following section, the formation and development of case study area on infill area is investigated to understand general context.

Figure 4.6. 1996 dated 1/5000 scaled Master Plan (The archive of the Metropolitan Municipality of Mersin

4.2 The Formation and Development of Case Area as a Recreational Public Space and a Pedestrian Focus

The sea is the most significant factor on the establishment of Mersin and development of Mersin as a metropolitan city from a coastal town. Mersin, has 150 years' history, lets the region of Çukurova to open through Mediterranean world. And so, Mersin has developed with essential economic, social and spatial transformations since the second half of the 19th century. The macroform of the city has formed around a single centre of growth and development (Figure 4.7) (Belge, 2012: 85-89).

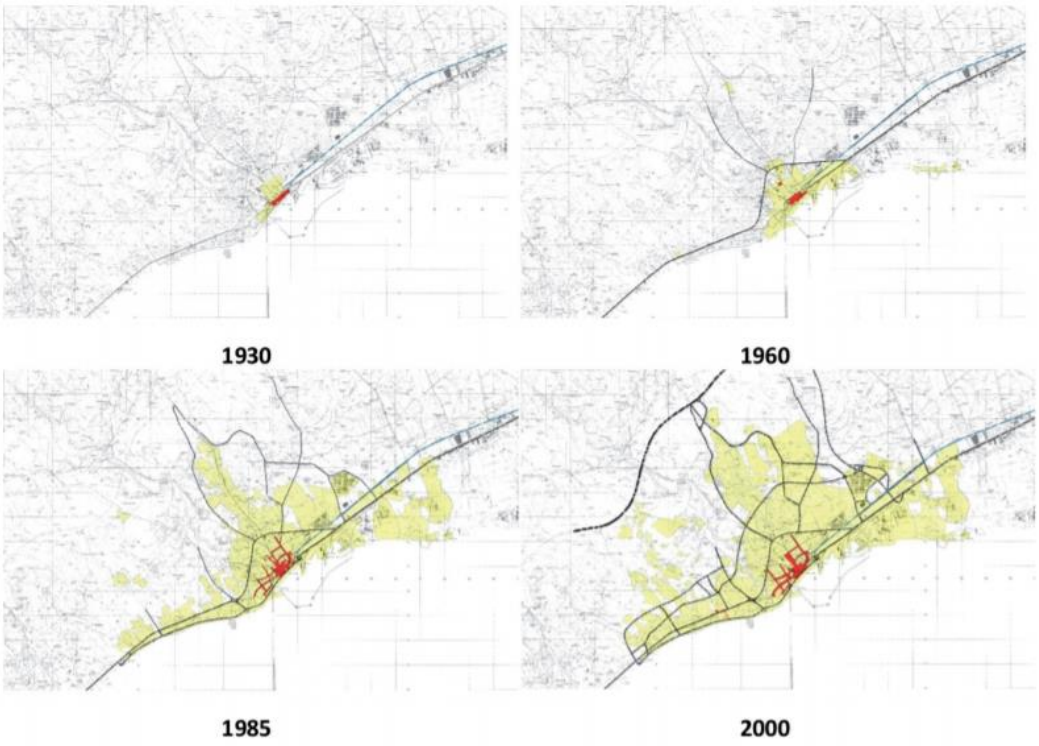


Figure 4.7. The Development of Macroform between 1930 – 2000 (Akkar and Belge, 2017: 242)

In addition to agricultural areas, the development of Mersin has affected near rural areas, so rural settlements became small-scale municipalities, then the Municipality of Mersin was declared as the Metropolitan Municipality in 1993 by the Decree Law 504. However, rapid urbanization over rural area had caused such problems in Mersin Metropolitan area. Due to the limited public lands in the city of Mersin and its development areas, there are difficulties in obtaining the proposed public spaces in the plans. Large green spaces would not be created by planning decision. In order to overcome these deficiencies, the development of coastal fill areas as recreation areas has been developed as a plan strategy. In defined context, similar strategies used for the construction of the Atatürk Park with the International Port in the 1960s (Figure 4.8). After 1985, filling works started in the western part of the city, in the coastal area between Hilton hotel and Marina (Figure 4.9) (The MMM, 2016: 3-4).

Figure 4.8. The construction of International Port and infill areas along the historic city centre of Mersin in 1960 (The archive of the Metropolitan Municipality of Mersin

Figure 4.9. Aerial views indicating ongoing filling works between Hilton Hotel and Pozcu District in 1991 (The archive of the Metropolitan Municipality of Mersin)

In the first phase, between 1985-1990, the 3500-meter section between the Hilton Hotel and the Marine was filled. In this area, Adnan Menderes Boulevard was built. Moreover, the embankment and landscape works were completed in the filling area. In the western part of the area, filling works were continued after 1990 and remaining

4900-meter section had been filled, then the Boulevard and landscape were completed. The construction of the marina was started in 1993 in the second stage of the filling works in the western part of Mersin. In 2012, the Marine was completed and opened with varying functions including not only sailing facilities but also shopping mall and social facilities (The MMM, 2016: 4).

Then current master and regional plans indicates case area, Mersin Coastal Park as recreational area. 1/25.000 scaled Master Plan that prepared by the Metropolitan Municipality of Mersin in 2008. Similarly, 1/100.000 scaled Environmental / Regional Plan approved in 2013 schematically defines sea-side as Recreation Area.

Figure 4.10. 1/25.000 scaled Master Plan (The archive of the Metropolitan Municipality of Mersin)

Figure 4.11. 1/100.000 scaled Environmental / Regional Plan (https://webdosya.csb.gov.tr)

In 2018, the Master Plan (1/5000 scaled) of Akdeniz, Yenişehir, Toroslar and Mezitli Districts was revised by the Metropolitan Municipality of Mersin. After legal procedures for approval, the Plan conserved sea-side as a large-scale recreation area with different scale green areas for metropolitan area.

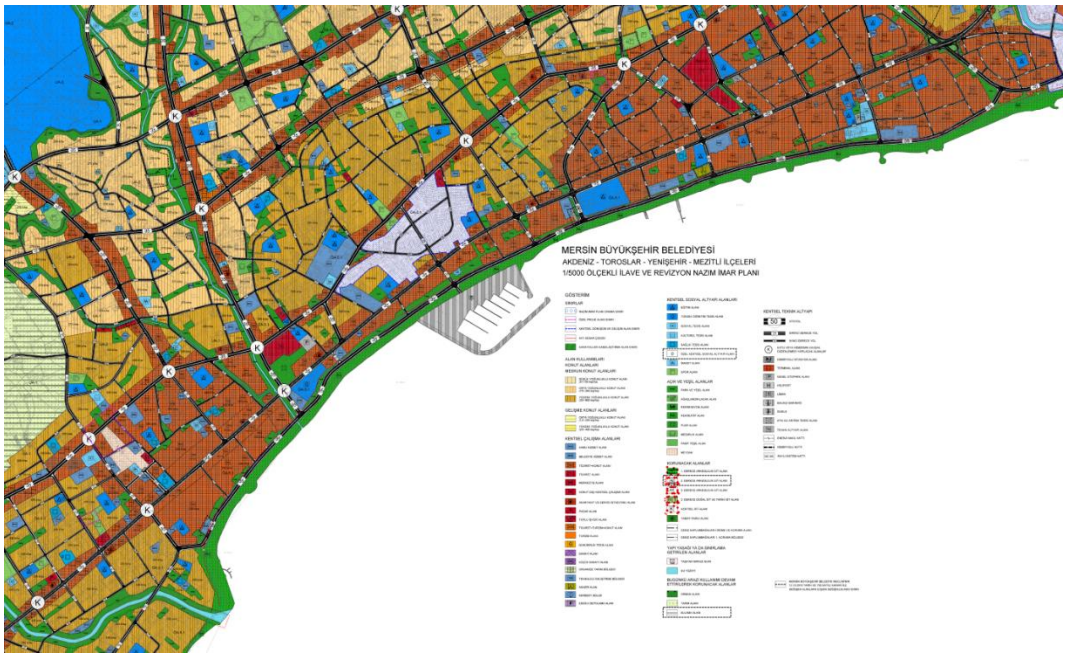


Figure 4.12. Current 1/5000 scaled Development Plan approved in 2018

In sum, case study area is determined as a public space according to legal terms and planning decisions. Therefore, case study area was designed as an open space with varying recreational facilities and landscape elements. The first implementations included shady trees and palms along Adnan Menderes Boulevard those still creates a continuous perception. Moreover, the works of Faculty of Fine Arts, Mersin University were temporarily or permanently exhibited in Mersin Coastal Park, especially in the western part of Coastal Park near to Mezitli Stream (Figure 4.13). However, there are too many public art elements with different styles and details, which sometimes causes chaotic perception.

Figure 4.13. Locations of some sculptures designed by the members of Faculty of Fine Arts, Mersin University (produced by the Author, Nov 2015 dated aerial view taken from vr.mersin.bel.tr)

Between 2017 and 2018, case area has been partially revised in stages. Many café-restaurants in the area were demolished and a new landscape arrangement, which includes bicycle roads, jogging and walking paths, open sport fields was implemented. Moreover, new decks and platforms had been constructed along Mersin Coastal Park.

The detailed assessment within the scope of the thesis study covers existing situation of the field.

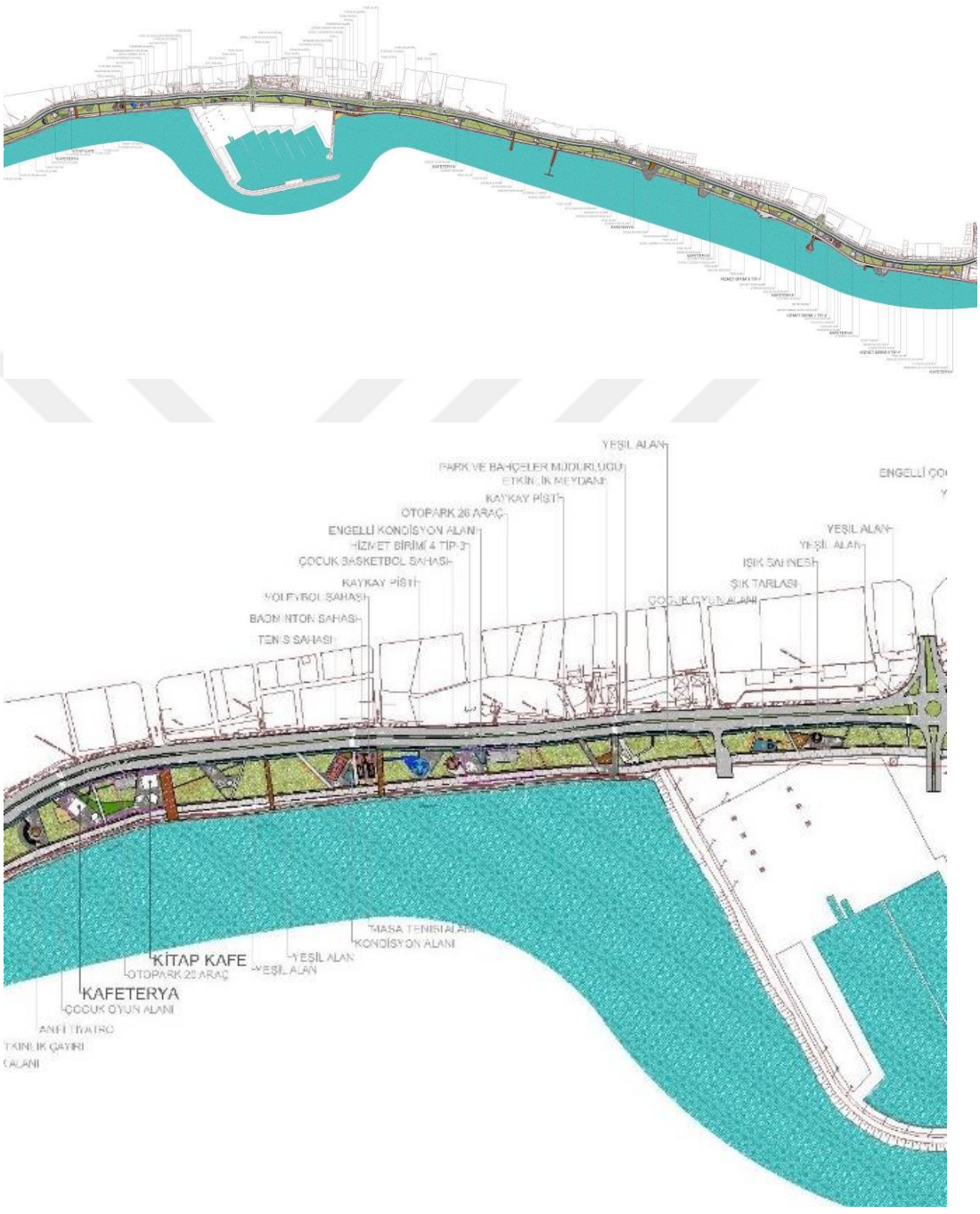


Figure 4.14. Architectural details of the last project of case study area.

4.3 The Spatial Context of Mersin Coastal Park

Mersin has been expanded along the Mediterranean coast since its establishments, but the macroform of the city has considerably changed in the last 50 years. The city recently lays approximately 30 km from east to west. The main aim of research is to observe the coast as a pedestrian and then to propose means to improve Coastal Park as a public space. The study affirms pedestrian not only as a mode of transportation in urban planning but also as a way to make places for themselves.

In defined context, the study criticizes the evolution of public space through history, especially in Turkey and the role of pedestrian as a dynamic character in public space during the development of public space to gain characteristics or identity. Out of vehicular traffic or mass transportation modes, each person with varying characteristics and goals is a pedestrian, who uses public space while shaping public space.

In Turkey, the utilizations and image of the public spaces are changing with the local policies. In the case of Mersin; this situation is done by ignoring urban design criteria. Consequently, the research looks for characteristics of Mersin Coastal Park as a recreational public space and a pedestrian focus in terms of openness/accessibility and accountability determined by varying features. Recent coast of Mersin has been formed by different filling operations since the beginning of 20th century. From the centre of Mersin to western residential district, a huge land has been filled to construct traffic roads, harbours, Marines or recreational areas. Today, most of filling area are used for recreational facilities. However, while some areas are efficiently used and have sense of place, some zones could not be used or ignored by pedestrians. It is a planning and urban design problem for the publicness of Coastal Park. Moreover, the setting of coast has crucial effects of uses. Therefore, not only design of green area but also its relation with impact zones and relation with waterfront should be evaluated (Figure 4-15).

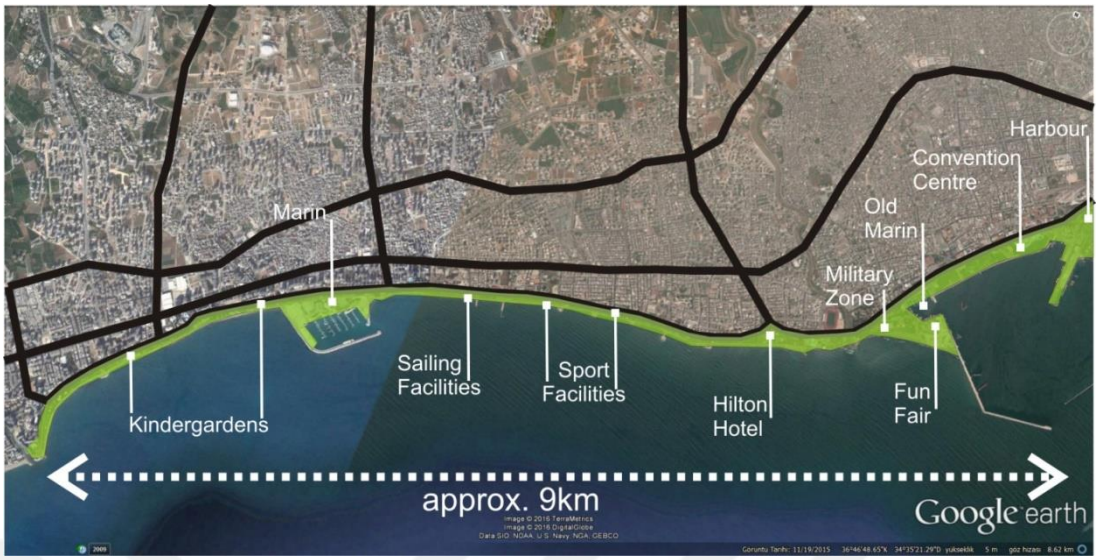


Figure 4.15. The limits and uses of the case study area

Mersin Coastal Park, as a filled platform, defines a kind of facade of the city up to the sea. The rapid and constant circulation on the coastline breaks it. Therefore, its function as a green area is uncertain. Recent constructions, parking areas, gastronomic facilities, the Marinas, culture centres, administrative units, kindergartens, sport facilities for walking or running or just recreational activities especially does not raise the expected level. On the contrary, shopping malls and centres succeeded in turning the coastline into the notorious place of the city. In defined context, how pedestrian movement would be efficiently used to transform coast into public space and how the publicness of coast could be evaluated in terms of accessibility, openness and design quality?

Infill developments and huge recreational areas along the coast caused to lose the characteristic of Mersin as a Mediterranean Port City. Nowadays, high density, development pressure and implicitly vehicular traffic in the city disturb pedestrian movements in relation with lack of liveable spaces. Naturally, citizens tend to choose more liveable and comfortable areas, so commercial dynamics and potential prefer to move to shopping malls. In addition, high-rise apartments and vehicular traffic are lying parallel to the coast. Thus, interconnections between inner sides and the sea are interrupted. Moreover, recreational area that is located on the infill area does not

include pedestrian axis from inner sides towards into Coastal Park. Especially car parking creates barriers for north-south directed movements. Furthermore, negative spaces and lack of transportation facilities cause loses in public spaces networks, so publicness of Mersin Coastal Park is harmfully affected (Figure 4-11).

As sum, there are too many overdesigned area and concrete uses in recreational spaces. Sculptures, abstract forms, sometimes over-detailed figures, replicas of ancient or modern structures or heroes from cartoons create a mess of design in Coastal Park. On the other hand, although an ordinary and routine relation is designed between Coastal Park and recreational activities, some areas in Coastal Park are densely used by varying social groups with changing income, age, gender, etc. while there are some loose spaces in same context.

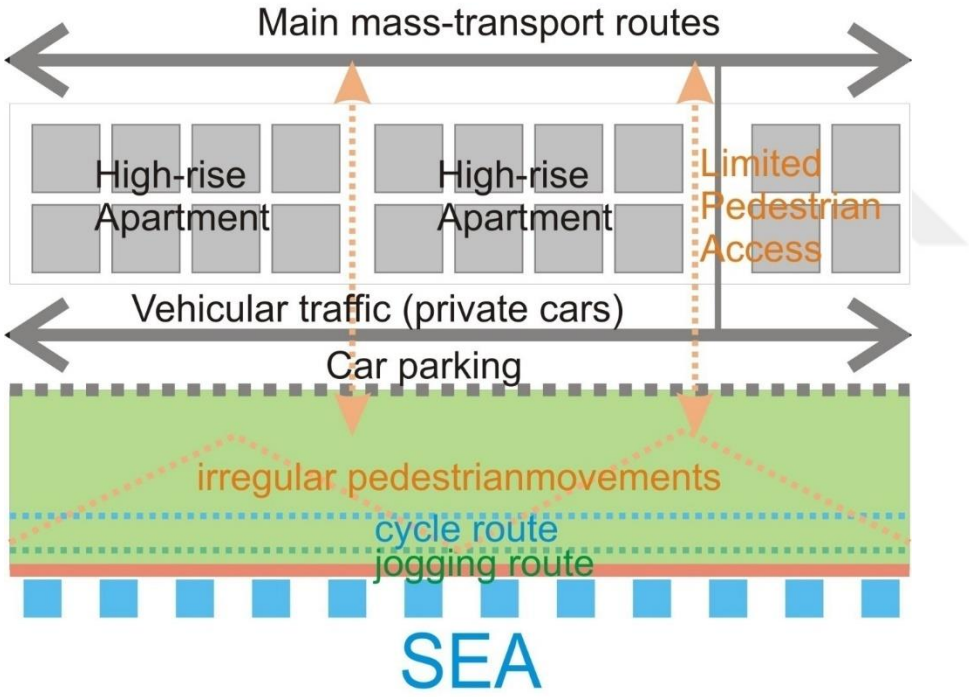


Figure 4.16. Current relations and movements in case study areas

Not only recreational facilities or aesthetic quality in case study area, but also impact zones, foci, characteristics of built-up area and different land use patterns at the northern side of Adnan Menderes Boulevard are going to be effective to define tentative sub-zones in case study area.

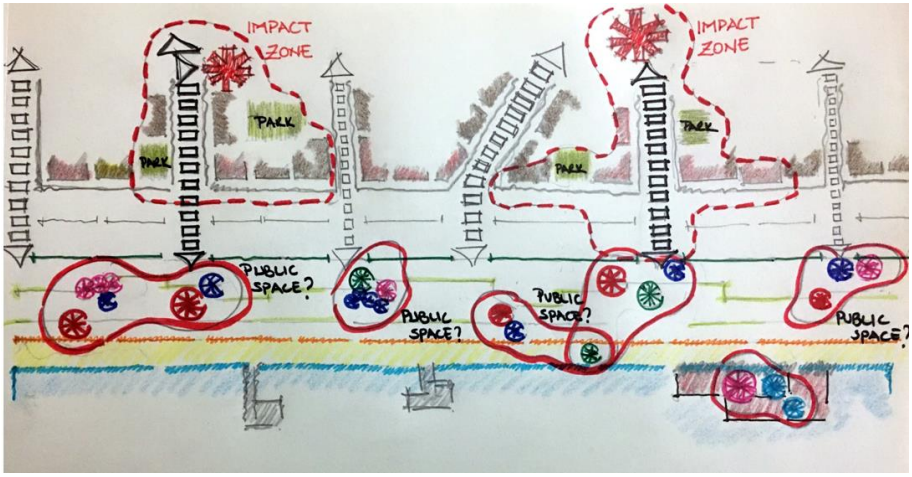


Figure 4.17. Tentative sub-zones

In defined context, 3 sub-zones are defined according to the characteristics of Mersin Coastal Park and its impact zone inside the boundaries of case study area. In other words, the sub-zones are determined according to characteristics of Coastal Park and main functions in impact zone. Zone-1 is starting from Mezitli Stream at the west and continue till to the Campus of Mersin University called as Yenişehir Campus. This zone is in the District of Mezitli and has a direct relation with surrounding residential areas such as Viranşehir Neighbourhood. The exact boundary of private-public properties is not definitely described (Figure 4.18). Especially the western side of zone has a controlled relation with vehicular traffic after the junction of Adnan Menderes Boulevard and Babil Street (Figure 4.19, 4.20). From the western end of Zone-1 to the other parts of the Case Study Area, there are walking and jogging paths along Coastal Park and bicycle route along the other side (Figure 4.20). The eastern part of Zone-1 starting from the junction of Adnan Menderes Boulevard and Babil Street, the characteristics of Zone-1 dramatically changes with symbolic public arts elements like the replica of Side Apollo Temple and Galatasaray Square (Figure 4.21).

Figure 4.18. The western boundary of Zone-1 (produced by the Author, Nov 2018 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.19. The western part of Zone-1 (produced by the Author, Nov 2018 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.20. The mid-part of Zone-1 (produced by the Author, Nov 2018 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.21. The eastern-part of Zone-1 (Nov 2018 dated aerial view taken from vr.mersin.bel.tr)

Zone-2 is between Yenişehir Campus of Mersin University and the eastern side of Marine, where there is the last conserved natural beach of the case study area. In details, there are administrative uses like the main centre of post office and accommodation facilities of police department (Figure 4.21). However, idle factory building and warehouse and vacant lands cut the relation between the case study area and its near d (Figure 4.23). After the entrance of Marine, (Figure 4.24), prestigious gastronomic facilities along Adnan Menderes Boulevard and natural beach determine a character zone in Zone-2 (Figure 4.25).

Figure 4.22. The western end of Zone-2 and surrounding uses (produced by the Author, Nov 2015 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.23. Zone-2 and surrounding uses (produced by the Author, Nov 2015 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.24. The entrance of Mersin Marine and near surrounding area (produced by the Author, Nov 2015 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.25. The eastern side of Zone-2 (produced by the Author, Nov 2015 dated aerial view taken from vr.mersin.bel.tr)

Then, Zone-3 is starting from the eastern side of Marine and ending with Hilton Hotel at the east (Figure 4.26). At the norther side of the western part of Zone-3, there are different public guesthouse and administrative facilities (Figure 4.27). The mid-part of Zone-3 has direct relations with Pozcu District, where there is a sub-centre for Mersin with social-cultural activities and gastronomic facilities, therefore, pedestrian flows and relations are examined in the following section. (Figure 4.28).

Figure 4.26. Zone-3 (produced by the Author, Nov 2015 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.27. the mid-part of Zone-3 (Nov 2015 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.28. the mid-part of Zone-3 (produced by the Author, Nov 2015 dated aerial view taken from vr.mersin.bel.tr)

Figure 4.29 presents overall boundaries of sub-zones along approximately 7,5 km recreational area from Mezitli Stream to Hilton Hotel.

Figure 4.29. Zone-1 / 2 / 3 and their boundaries in Mersin Coastal Park

4.4 User's Preferences in Mersin Coastal Park

In addition to questionnaires, short-interviews (Appendix-A) are made with users to evaluate and rank their expectations, needs and preferences for public space and to understand local pedestrian index for Mersin Coastal Park. According to total grades (1-5) of each aspect, average result indicates a local index. In Figure 4.30 red colours indicates the most essential aspects of public space for users in Mersin Coastal Park. After that, gradually, orange and yellow colours present other important aspects. Blue variable is less important factor for users. Finally, grey colour, "parking and on street parking" seems not effective on case study area.

In terms of methodological framework of the study, the following aspect are the most essential factors on users' expectation from a public space in Mersin.

- …for Inner Factors of Mobility
    - Availability of facilities and availability of services and amenities has remarkable effects of the expectations of users.
- …for Outer Factors of Mobility
    - Presence, location and continuity of bike lane and walking paths are essential for users. Similarly, sidewalk widths and condition are important.
- …for Inner Factors of Pedestrian Behaviour
    - Light affect the degree of perceived safety.
- …for Outer Factors of Pedestrian Behaviour
    - Convenient ways, lightening, legible paths and length of segments are critical.

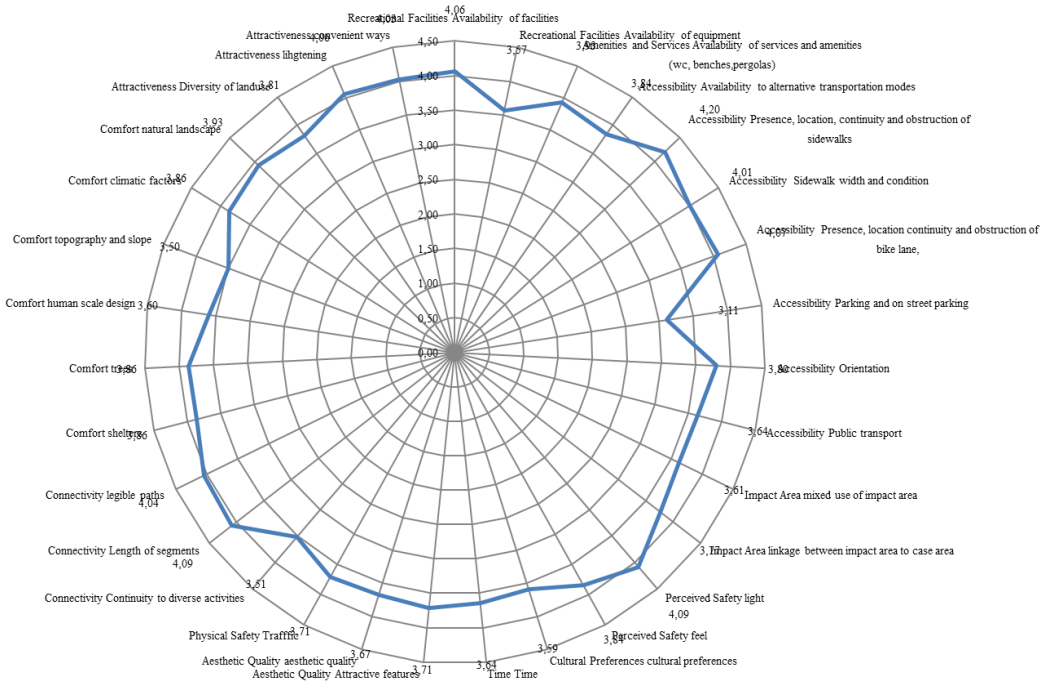


Figure 4.30. Local index for Mersin

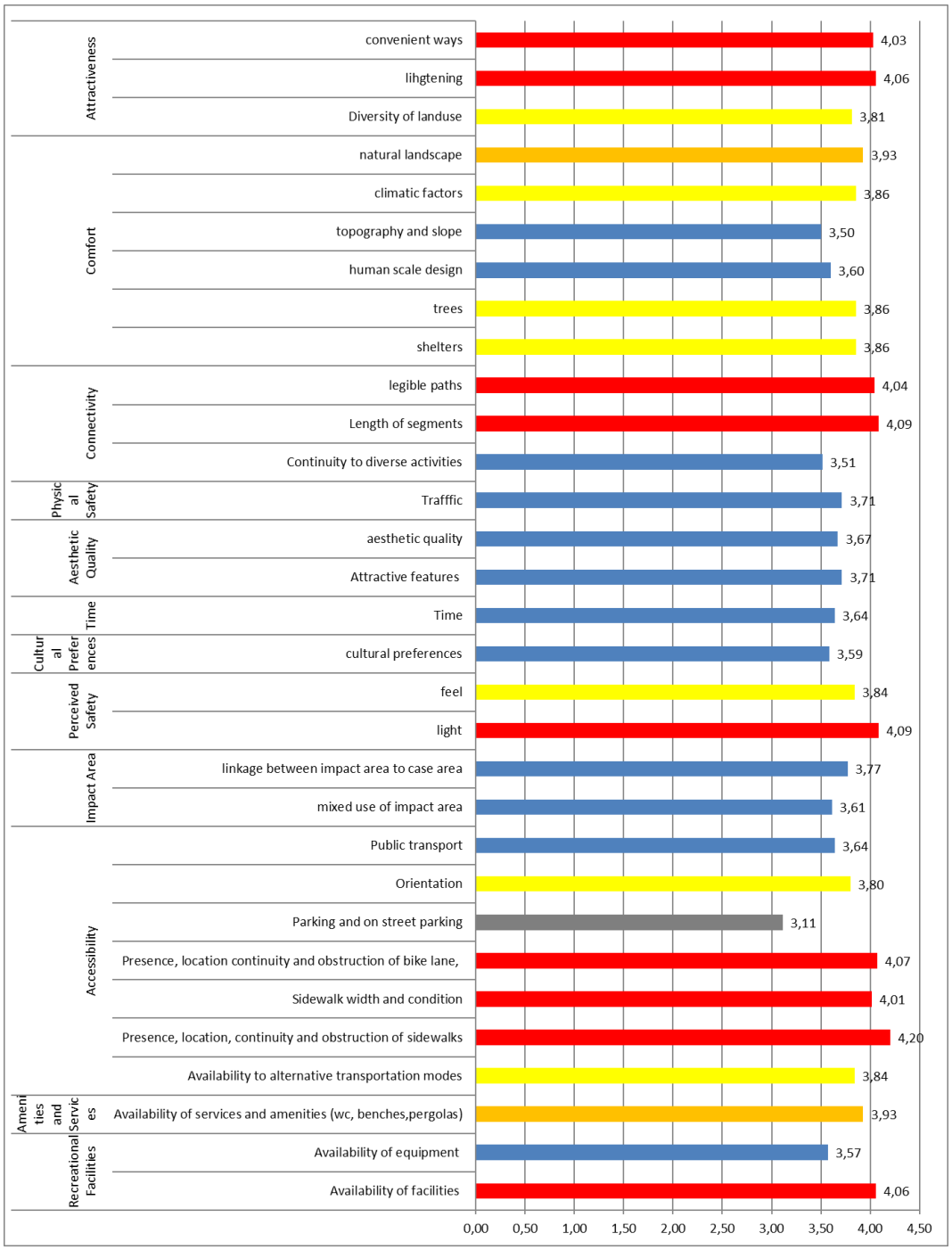


Figure 4.31. The results of Local Index.

CHAPTER 5

MERSİN COASTAL PARK AS A PUBLIC SPACE

In the Case Study Chapter, mobility and pedestrian behaviour are evaluated to understand effects of variable in making public space. In this chapter, field investigations, questionnaires and desk-based assessments are main tool to understand context of Mersin Coastal Park. Evaluations and discussions are developed on the basis of sub-zones in the case study area, then qualitative and quantitative comparisons are made between sub-zones. During these comparisons, sub-character zones in main zones are also examined to get factors creation sense of place for varying users in making public space. In defined context, first, mobility is studied with inner and outer aspects in the case study area. Then, pedestrian behaviour in Mersin Coastal Park is studied with its inner and outer components. At the end of chapter, Mersin Coastal Park is evaluated as a public space according to comparison of mobility and pedestrian behaviour.

5.1 Mobility in Mersin Coastal Park

As mentioned before, mobility is an ability to move inside of public space or/and access to such spaces. Therefore, in terms of making of public space, mobility is examined as not only accessing somewhere else, but also ease of movement in that place. As summarized in Chapter 3, mobility, as one of the main component of public space has inner and outer aspects in making public space.

Inner indicators of mobility include recreational facilities like services and amenities or features of public space. These factors are parts of public space directly affect ease of movement in public space. On the other hand, accessibility and impact zone are outer indicators of public space; those are independent from public space, and these factors are related with not using but reaching to public space. In defined context, inner factors of mobility in Mersin coastal park are examined in the following sections

5.1.1 Inner Factors for Mobility

5.1.1.1 Public Recreational Facilities of Mersin Coastal Park

As briefly mentioned in the development of case study area, Mersin Coastal Park had been obtained by infilling the sea. After that, whole filled area has been used as Adnan Menderes Boulevard and recreational area between sea and the Boulevard. Although, whole area was designed and used as a recreational zone belonging to public, there are varying facilities determining character zones in case study area. The boundaries of recreational zone are generally defined by the boulevard and coastline. There are some arrangements and open spaces to increase recreational area on the Coastal Park. The width of recreational area is between 50 to 120 m in Zone-1, 50 to 70 m in Zone-2 and 30 to 70 m in Zone-3: Especially the western side of Zone-1 would be defined as a separate area without vehicular traffic. Public recreational facilities of case study area and the perception of different users have significant roles. Therefore, the qualitative aspects of case study area are examined by detailed field investigations. Furthermore, such features of each zone in case study area are examined by questionnaires.

As mentioned in literature review and methodological framework, availability of facilities and equipment are essential for recreational places. Public recreational facilities in terms of availability of facilities and equipment improve pedestrian conditions and encourage pedestrian activity by enhancing functionality and vitality to the pedestrian realm. Moreover, pedestrian facilities and equipment would enrich the pedestrian movement. In defined context, two questions related to the variable; availability of facilities and equipment were asked to pedestrians. As mentioned in Chapter 3.2.3 (Questionnaire) two sets of questionnaire were completed in case study area in Fall 2018 and Summer 2019. Regarding the question of *"whether there are enough benches and resting places along Coastal Park"*, users, in Fall 2018, evaluate benches and resting areas as sufficient in Zone-1 and Zone-2 (Figure 5.1). In Summer 2019, similarly, the great majority of respondents thought that there are sufficient benches and resting places in the case study area. In Zone-1 and Zone-2, the half of

users stated that the area between Mezitli River and Marina has sufficient benches and resting places. However, In Zone-3, the majority of respondents partially agree the adequacy of the number of benches and resting places. In sum, Zone-1 and Zone-2 are obviously better than Zone-3 (Figure 5.2).

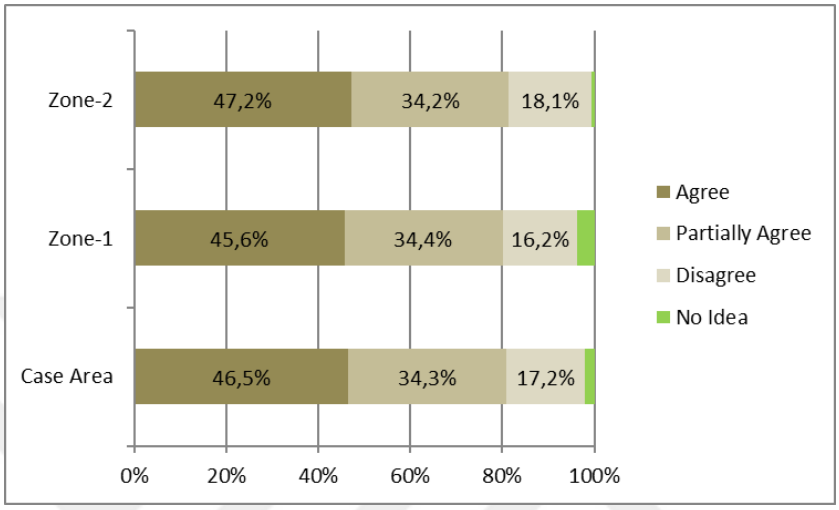


Figure 5.1. The outcome of Question-17 "Whether there are enough benches and resting places on the Coastal Park" in Fall 2018

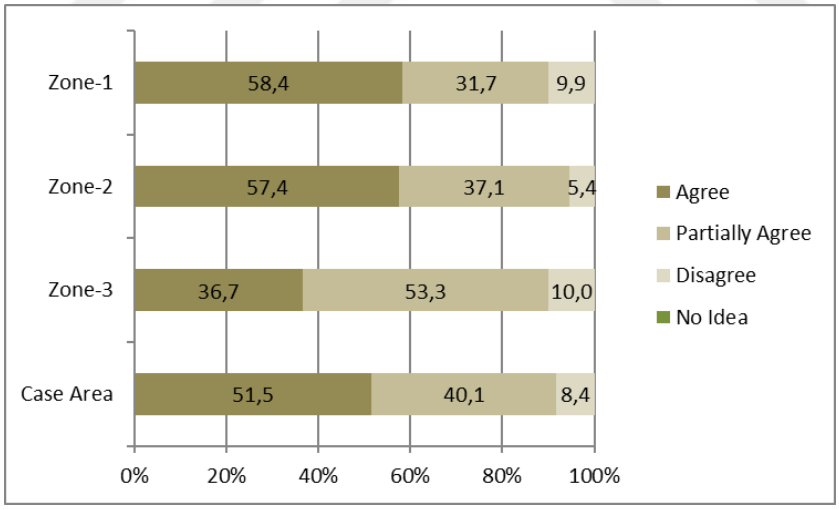


Figure 5.2. The outcome of Question-17 "Whether there are enough benches and resting places on the Coastal Park" in Summer 2019

On the other hand, in terms of gastronomic facilities in accordance with recreational facilities are examined by Question-30 "Whether there are sufficient gastronomic

facilities on the Coastal Park". One third of users in Zone-1 and one fourth of users in Zone-2 stated that gastronomic facilities are sufficient in Fall 2018 (Figure 5.3). However, in Summer 2019, the great majority of respondents especially in Zone-2 stated that the number of eating and drinking facilities are insufficient along Coastal Park (Figure 5.4).

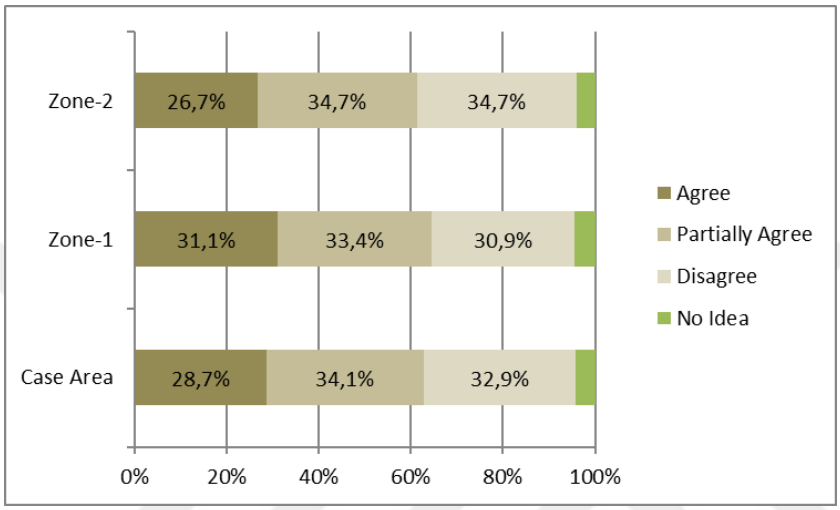


Figure 5.3. The outcome of Question-30 "Whether there are sufficient gastronomic facilities on the Coastal Park" in Summer 2019

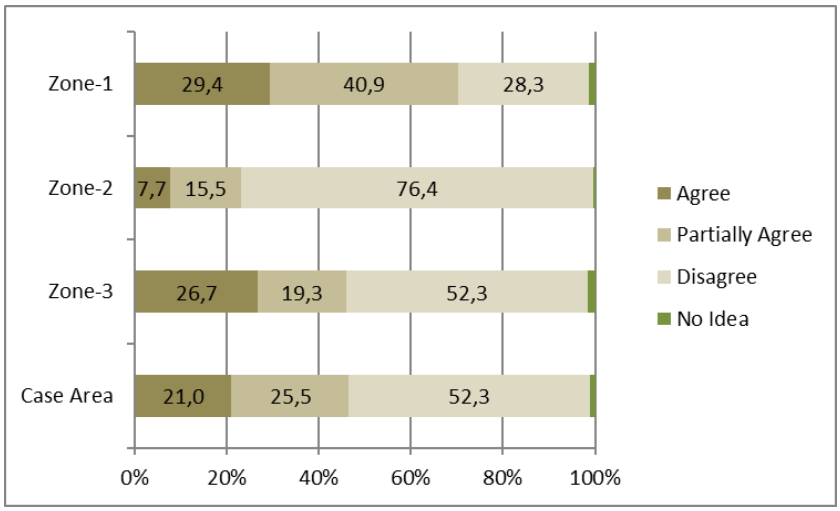


Figure 5.4. The outcome of Question-30 "Whether there are sufficient gastronomic facilities on the Coastal Park" in Summer 2019

In sum, according to the width of different segments of Mersin Coastal Park, Zone-1 has more appropriate space for recreational activities than Zone-2, and then Zone-2 is wider than Zone-3. Because of recreational meaning of the case study area for Mersin, there are randomly or unconsciously distributed recreational facilities (Figure 5.5/5.6/5.7).

In accordance to users' opinions, Zone-1 has recreational facilities and gastronomic services for daily needs. Similarly, as a recreational area, Zone-2 has sufficient facilities, but because of the lack of gastronomic services, there will be some issues for users. On the other hand, although Zone-3 has not appropriate recreational facilities, gastronomic facilities are more observable than Zone-2, maybe in a relation with sub centre in Pozcu District. The relation of case area with near surroundings is going to be discussed in following sections in details.

Sport areas

Sport areas

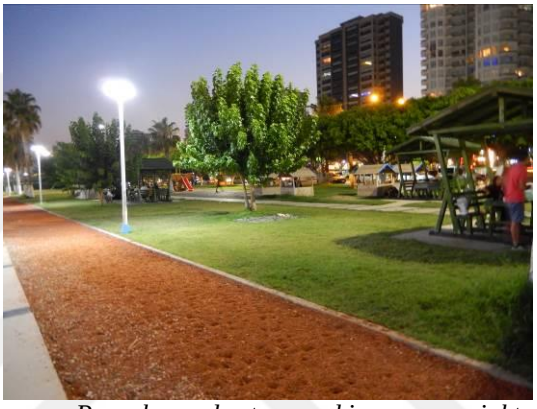
Pergolas and grass

Playground and informal sector

Figure 5.5. Public recreational facilities in Zone-1 (personal archive)

Canopy on a gathering space

Pergolas and soft ground



Pergolas and sot ground in summer night

Sport areas

Playgrounds

Figure 5.6. Public recreational facilities in Zone-2 (personal archive)

Pergolas and soft ground

Sport facilities

Playground, skate boarding area and grass

Coastal Park and informal sector

Figure 5.7. Public recreational facilities in Zone-3 (personal archive)

5.1.1.2 Services and amenities

Sports stands/seating, picnic tables, water fountains, restrooms, trash bins, pergolas or different types of street furniture are amenities serving different levels of people's needs. Therefore, the number of such amenities and their locations have significant effects on public places. In defined context, in Zone-1, there are sports areas, pergolas, benches and different sized piers for varying activities. Especially, sport facilities and large open spaces are located on the western boundary of site. Furthermore, there are some sub-zones including pergolas and green spaces (Figure 5.8/5.9/5.10).

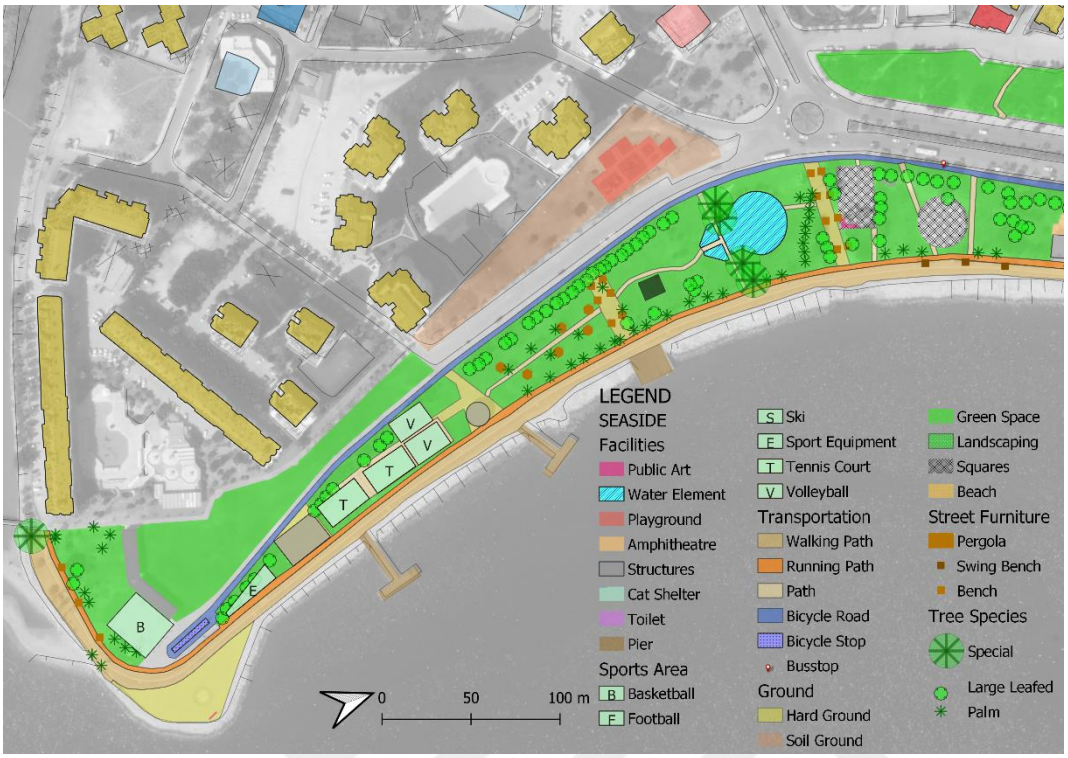


Figure 5.8. Main facilities and features of the western side of Zone-1

Figure 5.9. Main facilities and features of the middle part of Zone-1

Figure 5.10. Main facilities and features of the eastern side of Zone-1

In Zone-2, similar to Zone-1, there are sub-zones including different recreational facilities and services-amenities. There are benches and some walking paths in the western side of Zone-2, the south of Yenişehir Campus, but some parts are completely designed as green spaces (Figure 5.11). In the eastern part of Yenişehir Campus of Mersin University, there are some sporting facilities, skating areas and sports equipment (Figure 5.12). At the western side of the entrance of Marine, there are also some hard grounds for ski (Figure 5.13). Especially, the eastern side of the entrance of Marine includes sporting facilities coincide with a natural beach lets people to use sea and fishing activities and this area is unique for whole Coastal Park (Figure 5.14).

Figure 5.11. Main facilities and features of the western side of Zone-2 (in front of Yenişehir Campus)

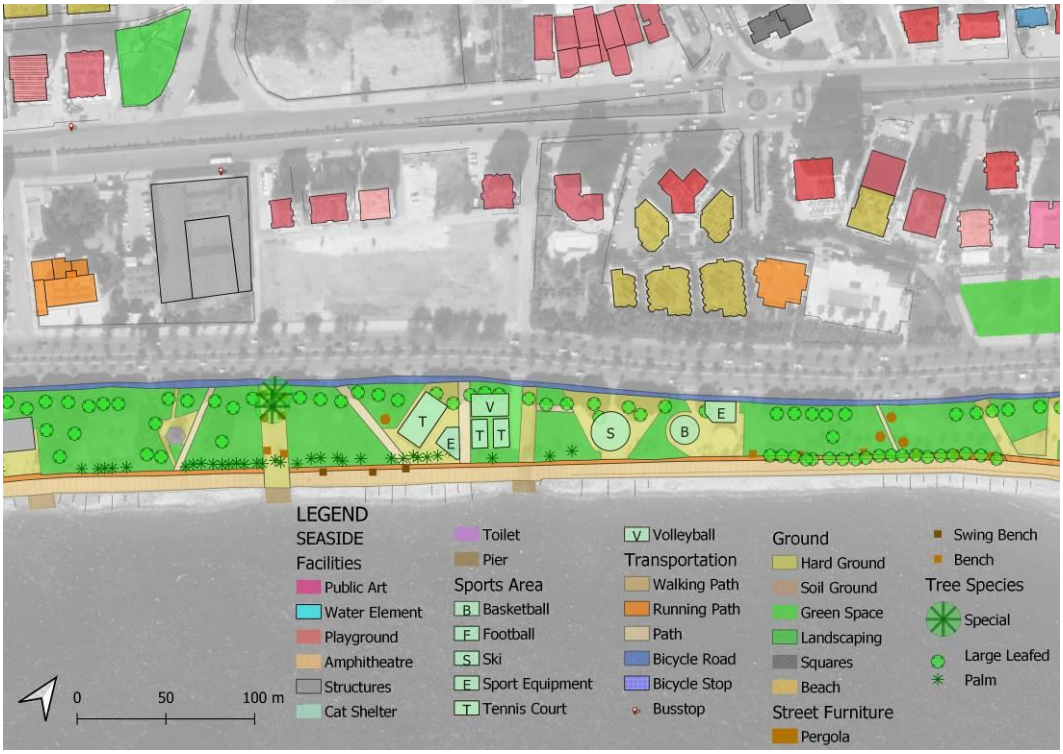


Figure 5.12. Main facilities and features of the eastern side of Yenişehir Campus in Zone-2

Figure 5.13. Main facilities and features of the northern side of Marine in Zone-2

Figure 5.14. Main facilities and features of the northern side of Marine in Zone-2

In Zone-3, which is longer than other two zones, there are different amenities and services with diversity of recreational facilities. The first sub-part of Zone-3 includes different hard grounds, groups of pergolas and playgrounds (Figure 5.15).

Figure 5.15. Main facilities and features of the western part Zone-3

The following parts of Zone-3 have linear shape with bicycle path at the northern side and walking-running paths at the southern side. Because of linear form of the area, the piers and platforms in different sizes and forms let to interaction between users to users or users and sea. Especially, the platform around Pozcu District represent a focus in Mersin Coastal Park with special trees. Unfortunately, cinema saloon in the Coastal Park, could not be integrated to recreational facilities, and it is vacant todays (Figure 5.16/17). Then, similar to other zones, large platforms, especially the platform and piers near to Archaeology Museum, define different sized recreational facilities for pedestrians (Figure 5.18/19).

Figure 5.16. Main facilities and features of the western part Zone-3

Figure 5.17. Main facilities and features of the western part Zone-3

Figure 5.18. Main facilities and features of the mid part Zone-3 near Pozcu District

Figure 5.19. Main facilities and features of the mid part Zone-3 near Pozcu District

After Archaeological Museum and its small-scale square, there is another platform with swing benches and arrangements. Furthermore, that sub-part of Zone3 include water elements (Figure 5.20). Finally, the eastern bound of Zone-3, partially decentralized form surrounding activities, and there is no defined recreational facility or amenities out of playgrounds (Figure 5.21).

Figure 5.20. Main facilities and features of eastern bounds of Zone-3

Figure 5.21. Main facilities and features of eastern bounds of Zone-3

In addition to investigations on field, for the assessment of "availability and placement of services and amenities" three related questions were asked to the pedestrians in the Coastal Park. The first question is *"whether the locations of benches in the Coastal Park are well chosen"*. The result of questionnaire in Fall 2018 indicates that, the majority of users in Zone-1 and Zone-2 (Figure 5.22) accepts the locations of benches. Regarding this statement, in summer 2019, the half of all respondents agree and approximately one-third of users partially agree the statement that the placement and location of benches and pergolas are well chosen (Figure 5.23).

Regarding "services and amenities", the second question is *"whether there are enough pedestrian amenities and facilities (Public toilets-water)"*. The most of users claimed that there are insufficient pedestrian amenities and facilities in the case study area, according to both the result of questionnaires in Fall 2018 and Summer 2019.

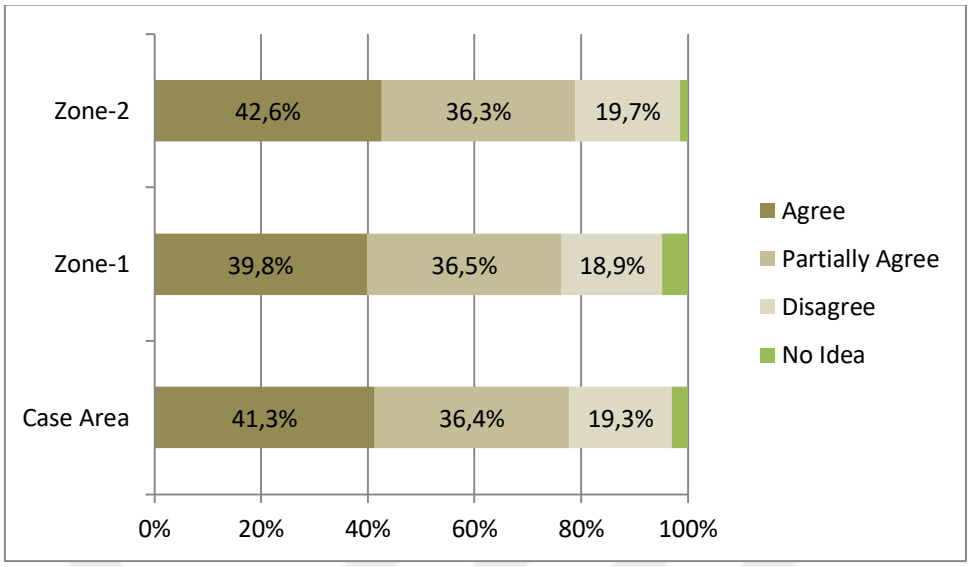


Figure 5.22. The questionnaire results for the statement of whether the locations of benches in the Coastal Park are well chosen" in Fall 2018.

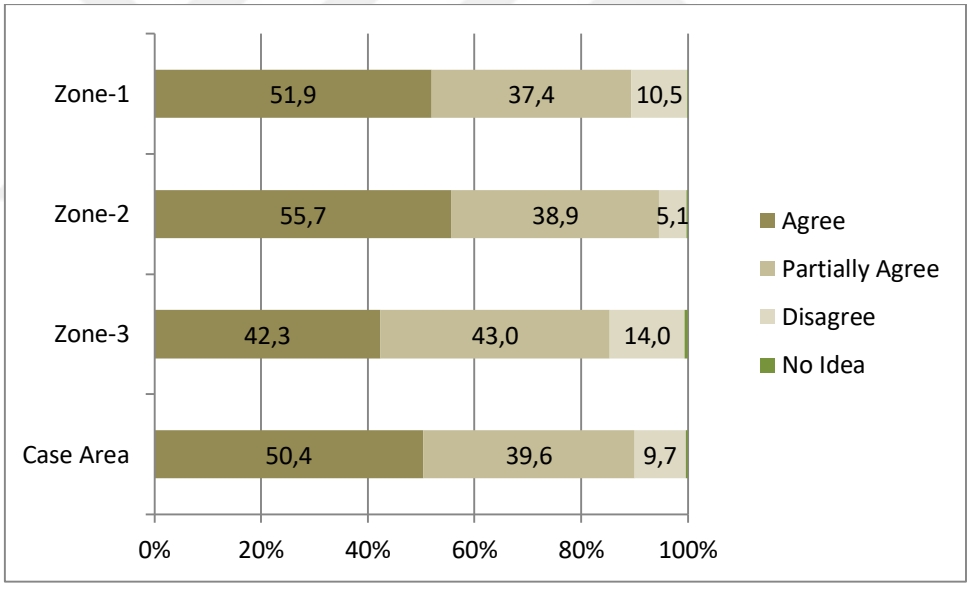


Figure 5.23. The questionnaire results for the statement of whether the locations of benches in the Coastal Park are well chosen" in Summer 2019

The rate of disagree users in Zone-2 is more than other zones, because Marina is providing some facilities and amenities in terms of public toilets, nursing room, daily needs etc. and in Zone-1 including public toilets. However, there is no pedestrian amenities and facilities along Coastal Park in Zone-3, which has vital mixed used

impact zone, but the private shopping areas, cafes and restaurants could not provide public services and amenities (Figure 5.24/25).

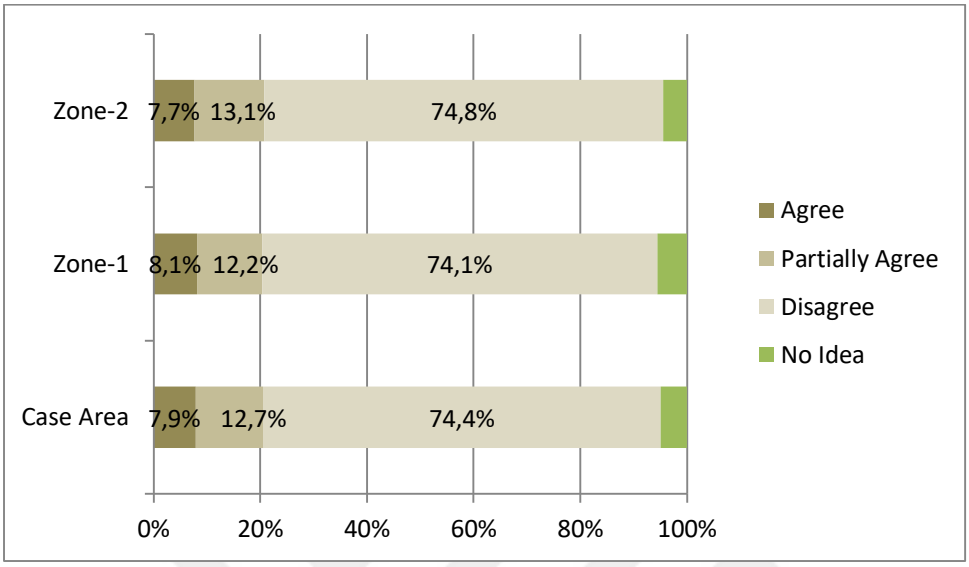


Figure 5.24. The questionnaire results for the statement of "whether there are enough pedestrian amenities and facilities (Public toilets-water)" in Fall 2018

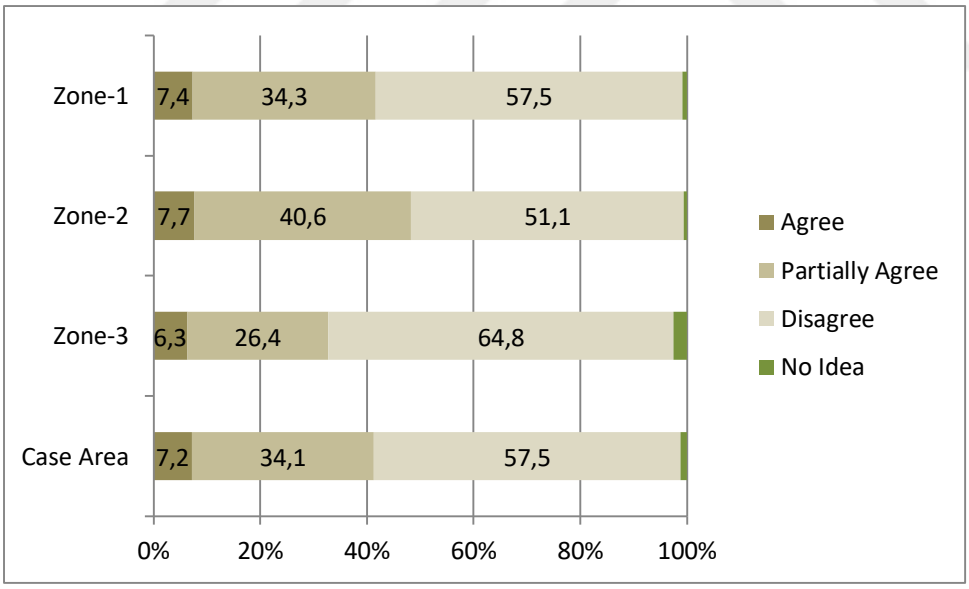


Figure 5.25. The questionnaire results for the statement of "whether there are enough pedestrian amenities and facilities (Public toilets-water)" in Summer 2019

Lighting of public space could encourage more pedestrian activity. A well-lit space provides pedestrian's comfort, safety, and encourages walking. The last question related to services and amenities variable of inner factor of mobility is “whether night lighting is sufficient in the case study area". In both questionnaires in Fall 2018 and Summer 2019, most respondents agree and approximately one-third respondents partially agree the statement that Mersin Coastal Park is a well-lit space at night (Figure 5.26/27).

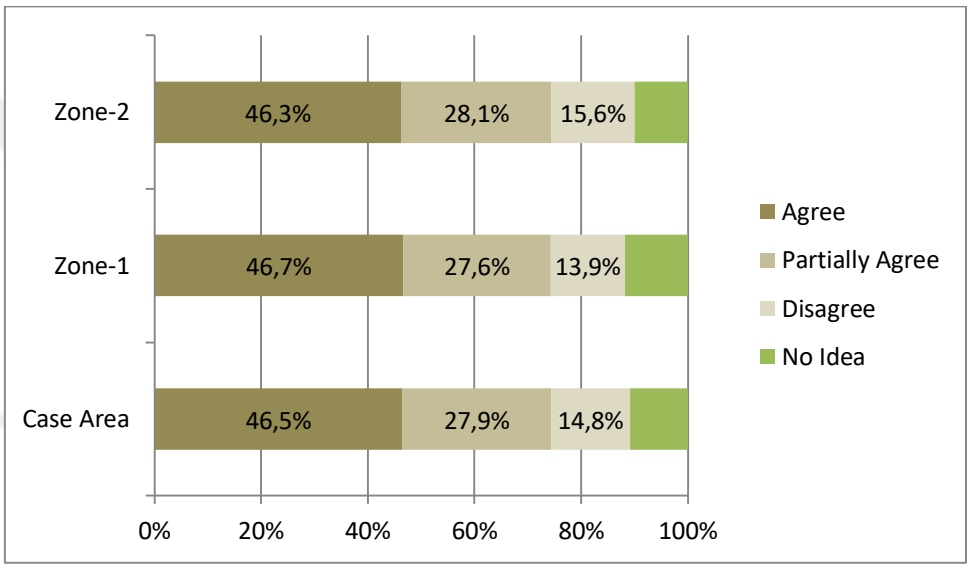


Figure 5.26. The questionnaire results for the statement of "whether night lighting is sufficient in the case study area" in Fall 2018

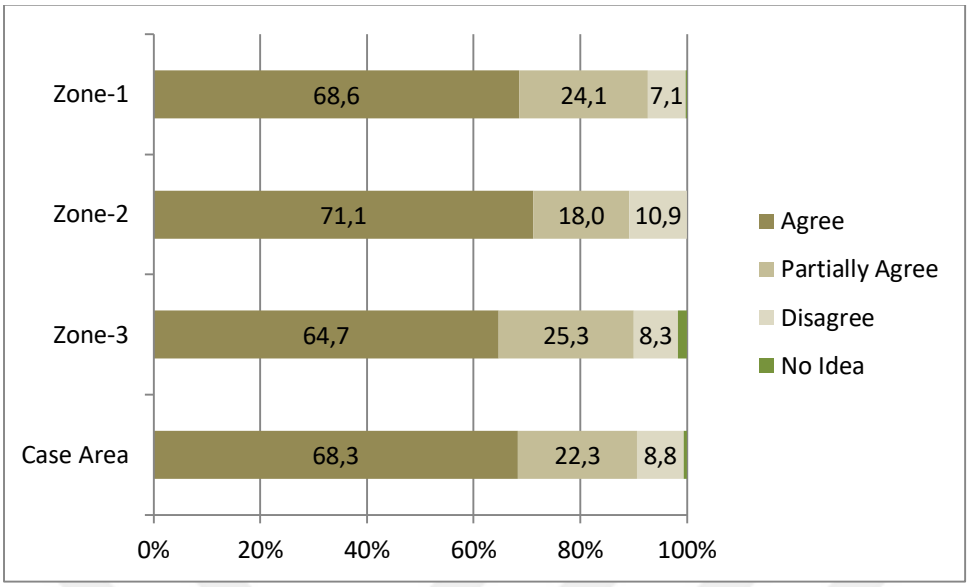


Figure 5.27. The questionnaire results for the statement of "whether night lighting is sufficient in the case study area" in Summer 2019

5.1.1.3 General Assessment of Inner Factors for Mobility

Consequently, according to services and amenities in Mersin Coastal Park, each zone has distinctive structures with different service and amenities including sports stands/seating, picnic tables, pergolas, water fountains, restrooms, trash bins, playgrounds or different types of street furniture. Furthermore, these types of activities determine foci in case study area. In any case, according to responses of users, Zone-1 and Zone-2 are better than Zone-3 because of different aspects (Table 5.1 and Figure 5.25).

Table 5.1. Summary table for inner factors of mobility

			Zone-1	Zone-2	Zone-3
MOBILITY	**Inner**	*Public Recreational Facilities*	*	+	+
		Services and Amenities	+	+	-

** Good*

+ Fairly good

- Poor

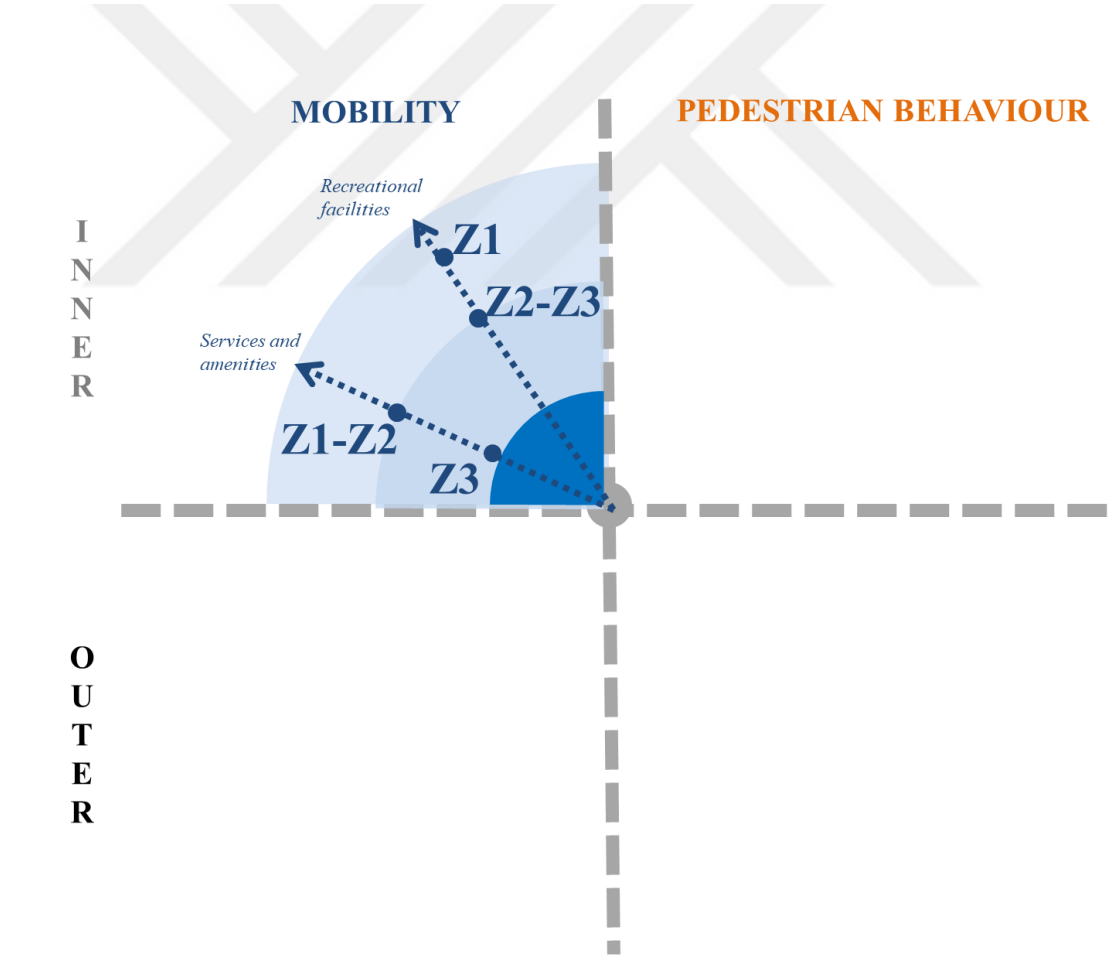


Figure 5.28. Inner indicators of mobility in making public space

5.1.2 Outer Factors for Mobility

5.1.2.1 Impact zone of Mersin Coastal Park

As we know, public space is an important component of the city in various forms. Therefore, the relationships, paths or connections between them, in particular, mean the knowledge or mobility of people on foot. These relations as a whole increase the diversity in the public space with variety of land-use and users, which provides satisfaction for the citizens.

Therefore, detailed land use of impact zone of Mersin Coastal Park is examined to follow relations and possible pedestrian flows from impact zone to sea zone or vice versa (Figure 5.29/30/31/32). The impact zone of Zone-1 includes mainly residential uses in a walking distance to Coastal Park. There are closed and gated communities at the western side. However, the relation with Viranşehir Neighbourhood and pedestrian flow along Mezitli Stream emphasize publicity of Zone-1.

When we investigating the impact zone of Zone-2, it is completely different from Zone-1. While the impact zone of Zone-1 determines a closed and direct relation with Coastal Park, the impact zone of Zone-2 could be defined a linear corridor between Gazi Mustafa Kemal Boulevard (D400) and Adnan Menderes Boulevard. Although, the westerns side of Zone-2, has a potential with the Campus, the Fair and Shopping Mall, because of traffic flow on Gazi Mustafa Kemal Boulevard and private car based orientation along the Fair and Shopping Mall, their effects are very limited. Furthermore, the Faculty of Education, which has a lot of student, had been transferred to main campus, so the Campus does not have a potential for the Coastal Park. The eastern side of Campus, there are vacant lands and idle structures. Accommodation facilities like the House of Police Department and Sultaşa Hotel serve their customers in a closed system. Therefore, their effects on the Coastal Park are limited. In addition to them, there are closed and gated communities at the northern part of Marine, where open spaces and recreational facilities have been reconstructed. However, these areas create a barrier between Gazi Mustafa Kemal Boulevard and the Coastal Park. Only the eastern side of Zone-2 has positive relation with Marine, where there are shopping

facilities and amenities, and the northern side, where there are prestigious gastronomic activities and pedestrian flow.

Similar to Zone-2, the impact zone of Zone-3 could be investigated within different sub-zones. Especially in the western side of Zone-3's impact zone, there are public services or public housing units of local authorities, which directly interrupts the relation with Gazi Mustafa Kemal Boulevard. However, the eastern side of area has a direct and continuous relation with residential district and sub-centre of Mersin that is known as Pozcu District. Therefore, the relations inside Pozcu District and some focal points like Kushimoto Street create pedestrian flow through the Coastal Park. However, the eastern side of Mersin Archaeological Museum and Muğdat Mosque, the relation with Coastal Park is interrupted again by the buildings of public authorities.

As a result of aforementioned discussions, Zone-1, which has a direct relationship with the nearby Viransehir Neighbourhood, Mezitli Stream, walking paths and residential areas, has a higher potential than other sub-regions. Similarly, Zone-3's relationship with the Pozcu Neighbourhood provides a more intensive use of some sub-regions. However, public uses are decreasing in the impact zone of the enclosed public housing area. In this context, due to the low connection with Yenişehir Campus, Police office and other sites, it cannot be supported in Zone-2 domain.

Figure 5.29. Land use in the impact zone of Zone 1

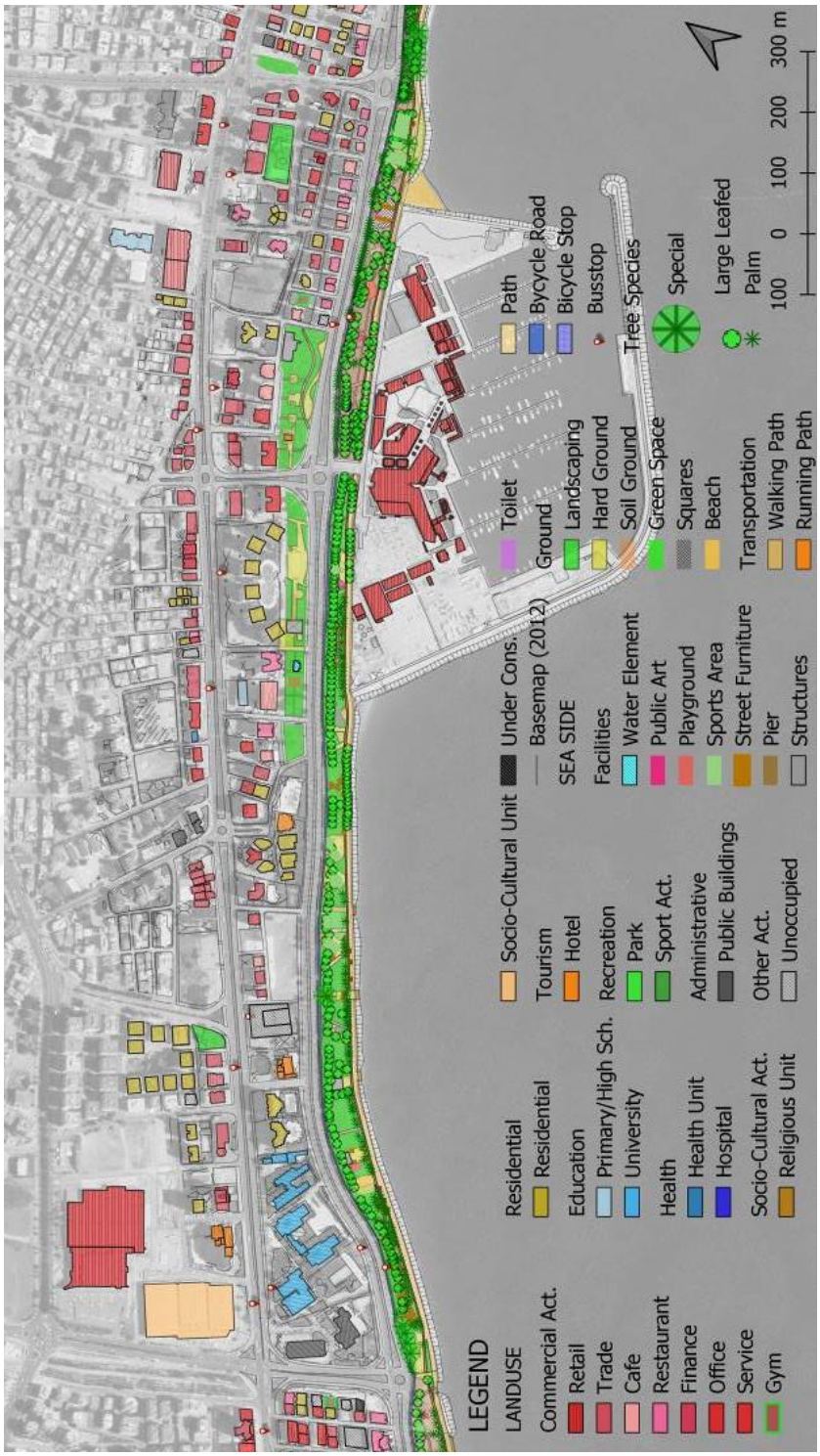


Figure 5.30. Land use in the impact zone of Zone 2

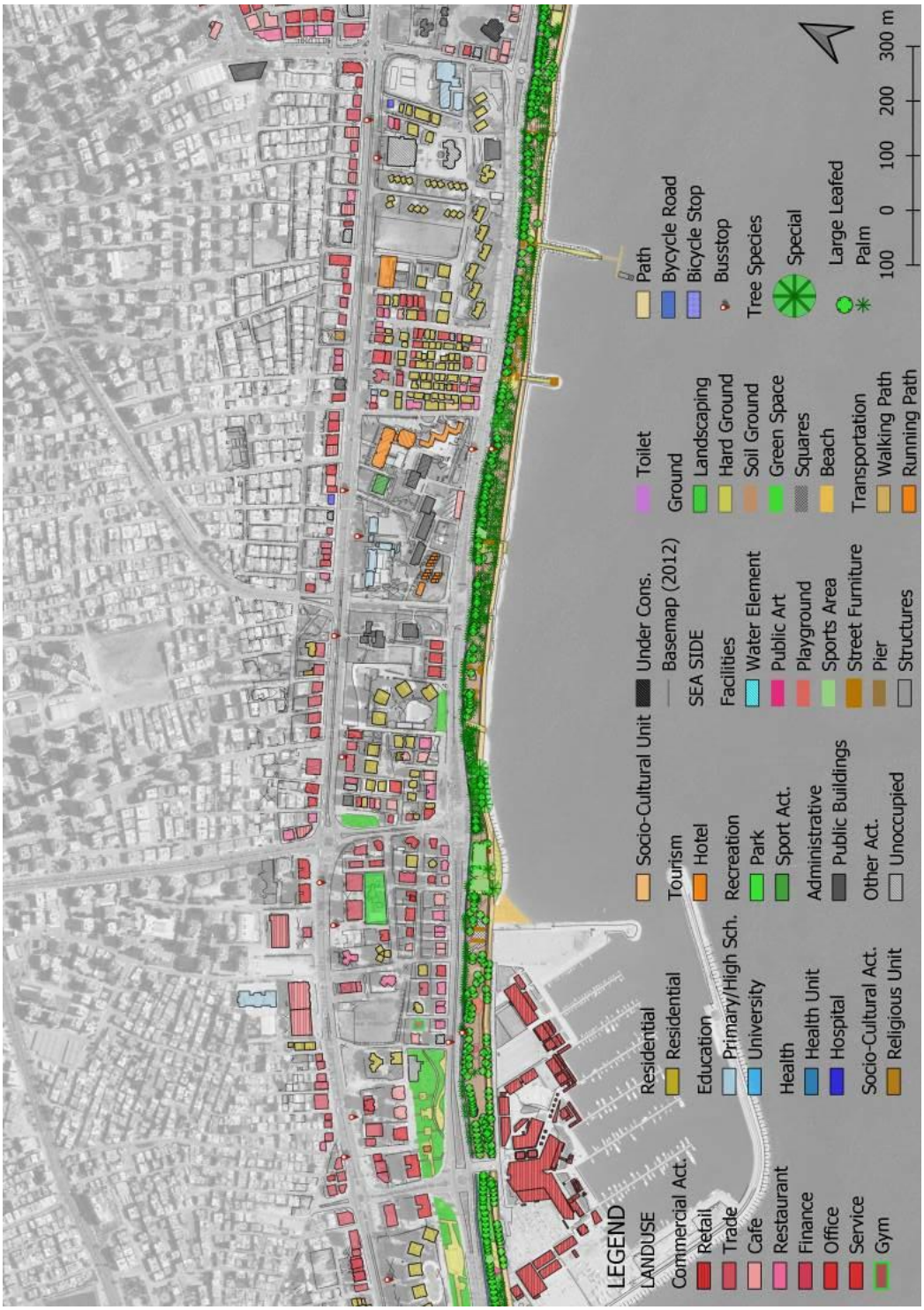


Figure 5.31. Land use in the impact zone of Zone 3a

Figure 5.32. Land use in the impact zone of Zone 3b

5.1.2.2 Accessibility of Mersin Coastal Park

Providing access to urban facilities, functions, amenities and transportation facilities encourages and enhances pedestrian movement. Accessibility is a fundamental component of mobility in terms of outer factors. Creating equal and walkable environment is primarily possible by bringing people to the public space. Therefore, increasing accessibility of an area creates more attractive spaces. "Availability to alternative transportation modes", "presence, location, continuity and obstruction of sidewalks", "sidewalk width and condition", "presence, location continuity and obstruction of bike lane, condition of bike lane", "parking and on street parking", "orientation" and "public transport" are determined as variables to assess the accessibility indicator in the Mersin coastal park.

For the assessment of "accessibility", eight related questions were asked to the users in the Coastal Park of Mersin. The first question is "*which transportation modes you use to coming to the case study area*", and two sub questions related with this main question were asked to the respondents. First one is "If *you come by private car, where do you park your car?"* and the other, "*whether there are enough parking areas for vehicles in case study area".*

Regarding the main question, in Fall 2018 (Table 5.2, Figure 5.33), half of the users (45.8%) come to the case study area *on foot*. More specifically, the responses of this statement are "*by bus or minibus (24 %)", "by car (18,2%)" and "by bike (2,5%)".*

- 87,2% of private car users parks their cars along the boulevard, and 7,9% of private car users prefer to use Marine's parking area.
- %72,4 of private car users see parking areas as insufficient.

Besides, a half of the respondents (47,8%) in Summer 2019 (Table 5.3, Figure 5.34) come to the case study area *on foot*. More specifically, the responses of this statement are "*by bus or minibus (28,6 %)", "by car (13,3%)" and "by bike (10,3%)".*

- %35 of private car users prefer to use Marine's parking area, others prefer on street parking.

– %53,2 of private car users see parking areas as insufficient.

*Table 5.2. : The outcome of Question 12 "which transportation modes you use to coming to the case study area" in Fall 2018. * 1-by car, 2-on foot, 3-by bus or minibus, 4-by bike*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		11	1,0	1,0	1,0
	1	191	18,2	18,2	19,3
	1-2	25	2,4	2,4	21,7
	1-2-3	2	,2	,2	21,9
	1-2-3-4	1	,1	,1	21,9
	1-3	2	,2	,2	22,1
	2	480	45,8	45,8	67,9
	2-3	49	4,7	4,7	72,6
	2-4	7	,7	,7	73,3
	3	252	24,0	24,0	97,3
	3-4	1	,1	,1	97,4
	4	26	2,5	2,5	99,9
	4-5	1	,1	,1	100,0
	Total	1048	100,0	100,0	

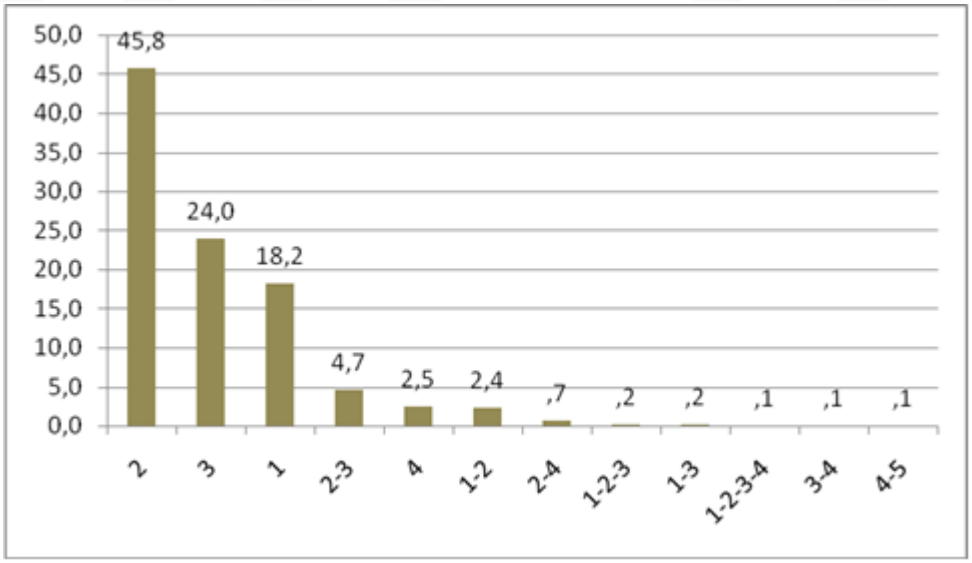


*Figure 5.33. The outcome of Question 12 "which transportation modes you use to coming to the case study area" in Fall 2018. * 1-by car, 2-on foot, 3-by bus or minibus, 4-by bike*

*Table 5.3. : The outcome of Question 12 "which transportation modes you use to coming to the case study area" in summer 2019. * 1-by car, 2-on foot, 3-by bus or minibus, 4-by bike*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		18	,9	,9	,9
	1	244	12,2	12,2	13,1
	1-2	68	3,4	3,4	16,5
	1-2-3	12	,6	,6	17,0
	1-2-3-4	2	,1	,1	17,1
	1-2-4	2	,1	,1	17,2
	1-3	16	,8	,8	18,0
	1-3-4	2	,1	,1	18,1
	2	714	35,6	35,6	53,7
	2-3	276	13,8	13,8	67,5
	2-3-4	30	1,5	1,5	69,0
	2-4	134	6,7	6,7	75,7
	3	392	19,5	19,5	95,2
	3-4	12	,6	,6	95,8
	4	84	4,2	4,2	100,0
	Total	2006	100,0	100,0	

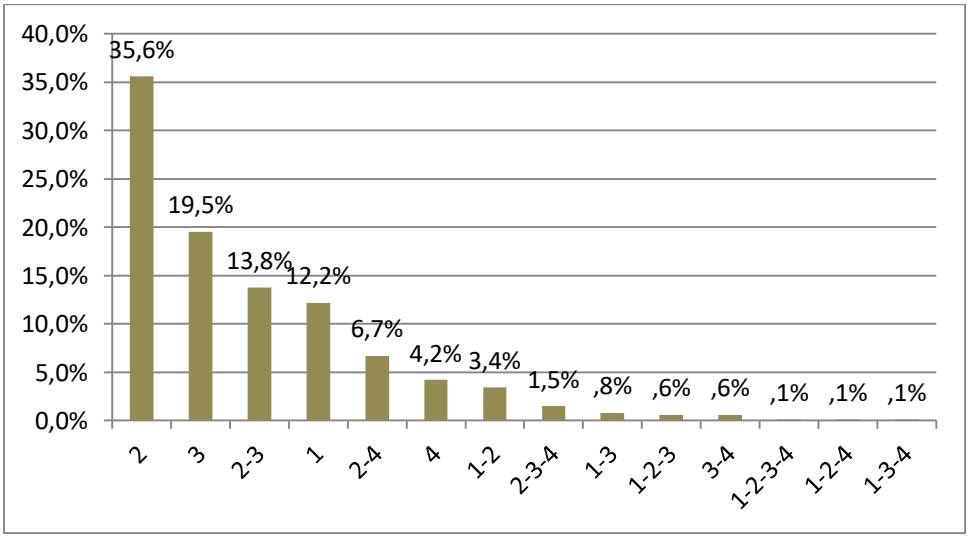


Figure 5.34. The outcome of Question 12 "which transportation modes you use to coming to the case study area" in Summer 2019. * 1-by car, 2-on foot, 3-by bus or minibus, 4-by bike

In addition, open-ended questions are asked to pedestrians to assess their views about outer factors of mobility. The sub question seeks to understand "if you come private car, where do you park your car?". Regarding this statement, in Fall 2018 87,2% and in Summer 2019 65% of users prefer parking their cars along Coastal Park also, in Fall 2018 7,9 % and in Summer 35% of users prefer to park in Marina's parking area. The other question seeks to understand that "whether there are enough parking areas for vehicles in the case study area". 53,2% of users claimed that there are no enough parking areas for vehicles in the case study (Figure 5.35)

According to the survey conducted at two different times, this difference in answers reveals the seasonal situation. Due to the weather, the use of private vehicles increases in the Fall period compared to the summer period and in terms of parking, people want to park near the area they will use, so the number of vehicles parked on the boulevard is more in the fall period.

Regarding "accessibility of case study area", the second question is *"whether the bike paths along the Coastal Park are sufficient"*. Most respondents (64,1%) of Summer 2019's questionnaires stated that the bike lanes of case study area are sufficient (Figure 5.36). However, since the construction of bicycle lanes has not yet been completed, fewer people (41,4%) find it sufficient in the 2018 Fall survey compared to the summer survey.

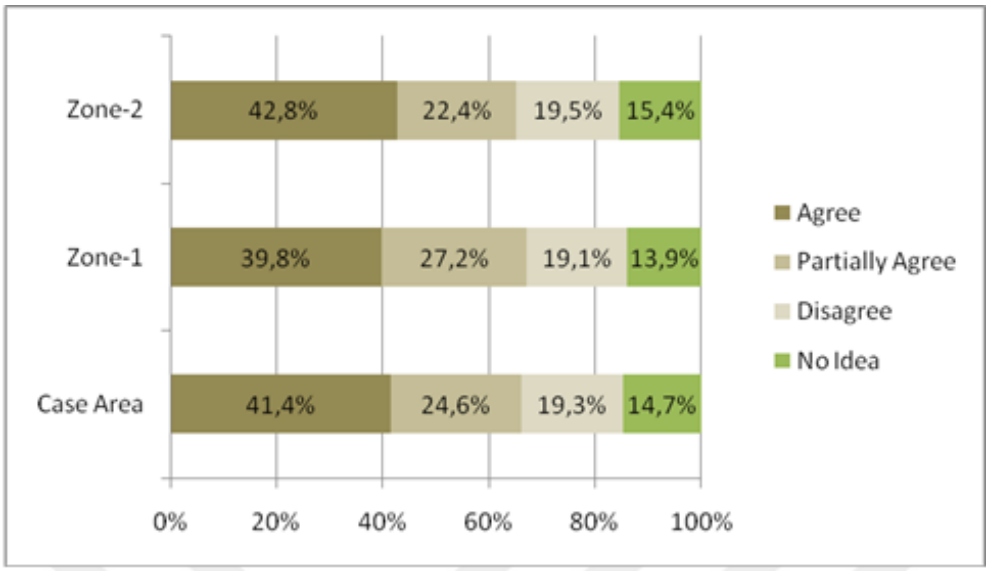


Figure 5.35. The outcome of Question 22 "whether the bike paths along the Coastal Park are sufficient " in Fall 2018.

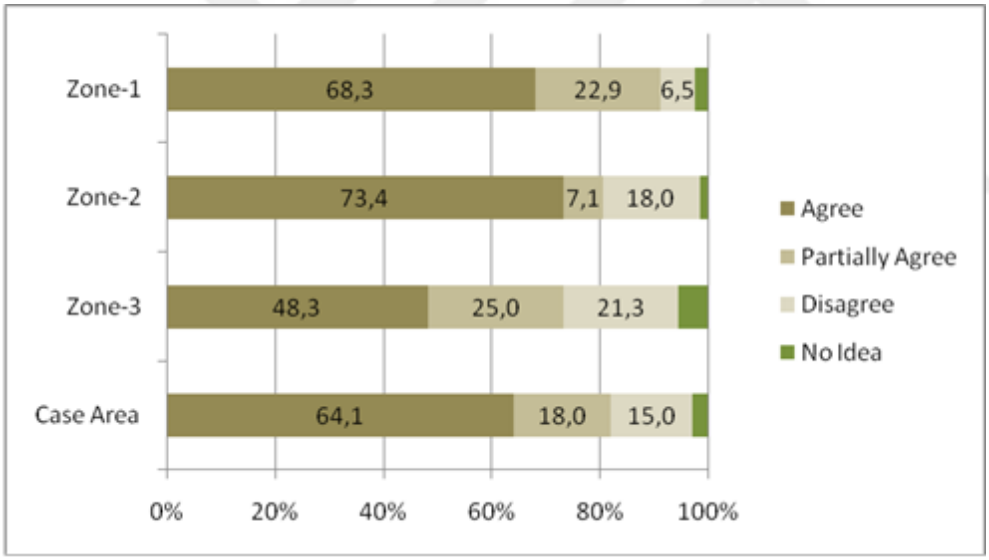


Figure 5.36. The outcome of Question 22 "whether the bike paths along the Coastal Park are sufficient " in Summer 2019.

Whyte (1980: 65), as discussed in Chapter 2, emphasizes that public space must be accessible to public at all times. Therefore, being able to access easily by walking to public spaces is a prerequisite to making public space.

In this case, the third question related to accessibility of case area is *"whether it is easy to reach on foot (by walking) to the Coastal Park "*. In Summer 2019, the majority of users (80,3 %), especially in Zone-2 (92,7 %) states that it is easy to reach to Coastal Park on foot. Similarly, in the fall half of the users say that they can easily access to the Coastal Park by walking (Figure 5.37/38).

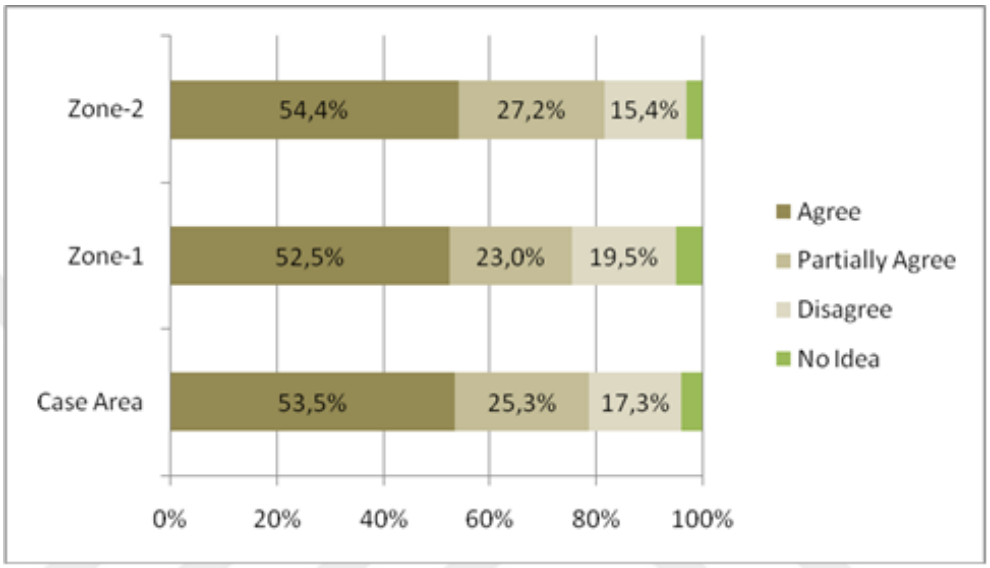


Figure 5.37. The outcome of Question 23 "whether it is easy to reach on foot (by walking) to the Coastal Park "in Fall 2018.

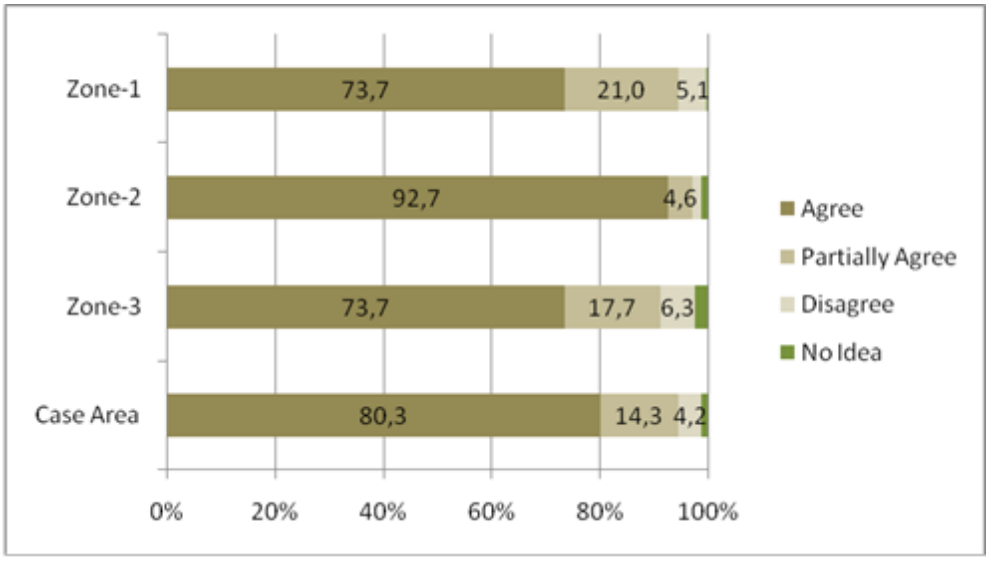


Figure 5.38. The outcome of Question 23 "whether it is easy to reach on foot (by walking) to the Coastal Park "in Summer 2019.

The other question of accessibility is "whether pedestrian paths along the Coastal Park are safe for the elderly, disabled people, children, parents with infants and children". In Fall 2018, in Zone-1 and Zone-2, one-third of users agree, one-third of users partially agree and the rest of users disagree about the safety of pedestrian paths along the Coastal Park for the elderly, disabled people, children, parents with infants and children. On the other hand, in Summer 2019, approximately half of the users of case study area partially agree that pedestrian paths along the Coastal Park are safe for the elderly, disabled people, children, parents with infants and children (Figure 39/40).

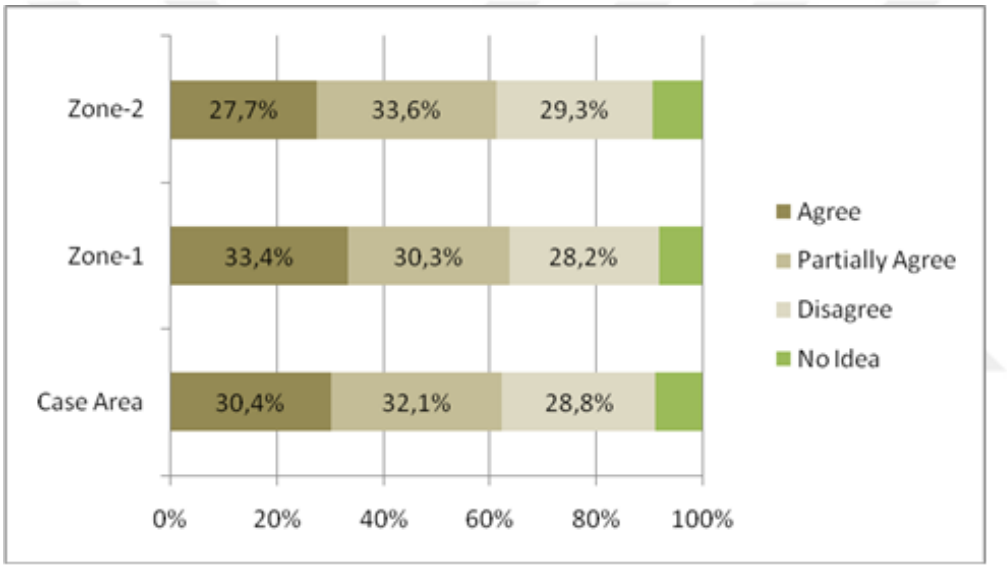


Figure 5.39. The outcome of Question 24 "whether pedestrian paths along the Coastal Park are safe for the elderly, disabled people, children, parents with infants and children" in Fall 2018.

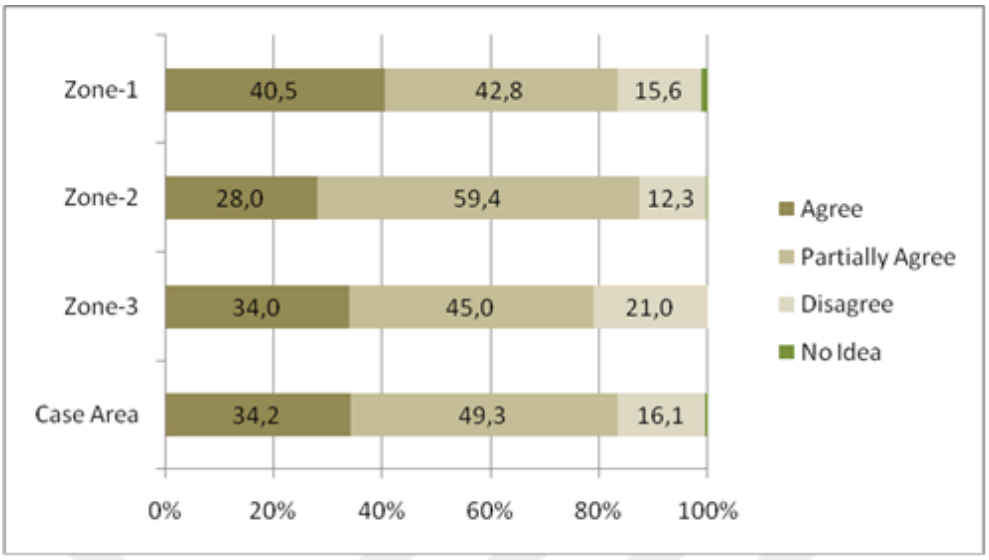


Figure 5.40. The outcome of Question 24 "whether pedestrian paths along the Coastal Park are safe for the elderly, disabled people, children, parents with infants and children" in Summer 2019.

In order to create good public space, ease of movement in the space should be provided for each individual. In that regard, to ensure the ease of movement for each individual, barriers should be removed and necessary arrangements made for people with disabilities or people in need. Resting and waiting units, arrangements and areas along walkways and public spaces provide getting rest to satisfy the accessibility.

In this regard, the fifth question related to accessibility of case area is *" whether there are enough arrangements (ramps, special paving) and facilities for blind and disabled people "*. Users, in Fall 2018, evaluate arrangements and facilities for blind and disabled people as insufficient in Zone-1 and Zone-2 (Figure 5.41/5.42). In Summer 2019, similarly, in Zone-3 more than one-third of users thought that there are not enough arrangements for vulnerable people. However, In Zone-1, 38% of respondents agree the sufficiency of the arrangements and facilities for this group.

As the field study reveals, the whole area is inadequate in terms of arrangements and facilities for vulnerable groups, but Zone 1 is in better condition due to the width of the area and including resting areas. According to direct observations and field study, one of the most significant problem of sufficiency of arrangements is that passing from

walkway to bike lane or green space is so difficult for vulnerable groups especially for wheelchair users, because of absence of paths adapted for disadvantage groups.

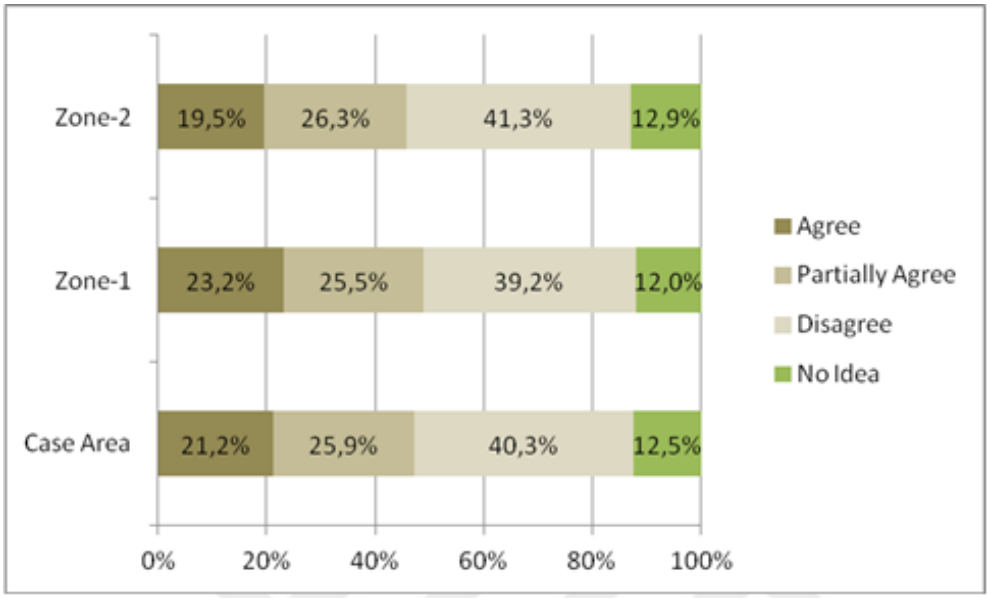


Figure 5.41. The outcome of Question 25 "whether there are enough arrangements (ramps, special paving) and facilities for blind and disabled people" in Fall 2018

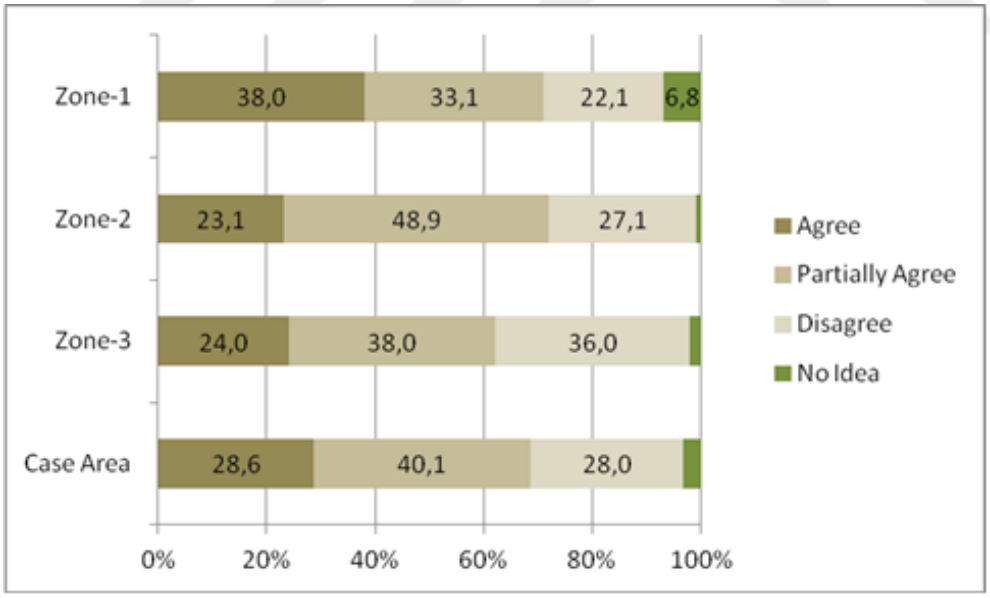


Figure 5.42. The outcome of Question 25 "whether there are enough arrangements (ramps, special paving) and facilities for blind and disabled people" in Summer 2019.

In terms of public transportation in accordance with accessibility are examined by Question-26 “whether it is easy to reach by bus or minibus to the Coastal Park”, approximately one-third of users in both Zone1 and Zone 2 stated that the case study area is easy to reach by public transport in Fall 2018 (Figure 5.43). However, in Summer 2019, the great majority of respondents (70,5%) in Zone-1 and half of users in Zone-2 (51,4%) and Zone 3 (51,3%)stated that it is easy to reach to the area by public transportation (Figure 5.44). The results of question clearly indicate that it is easier to reach Zone-1 by public transport compared to other zones.

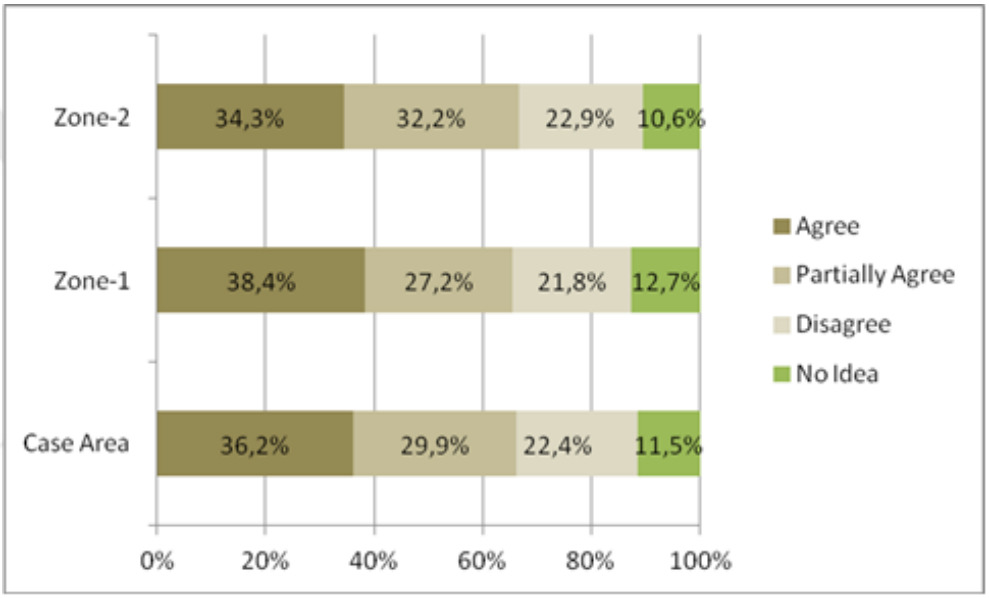


Figure 5.43. The outcome of Question 26 "whether It is easy to reach by bus or minibus to the Coastal Park " in Fall 2018.

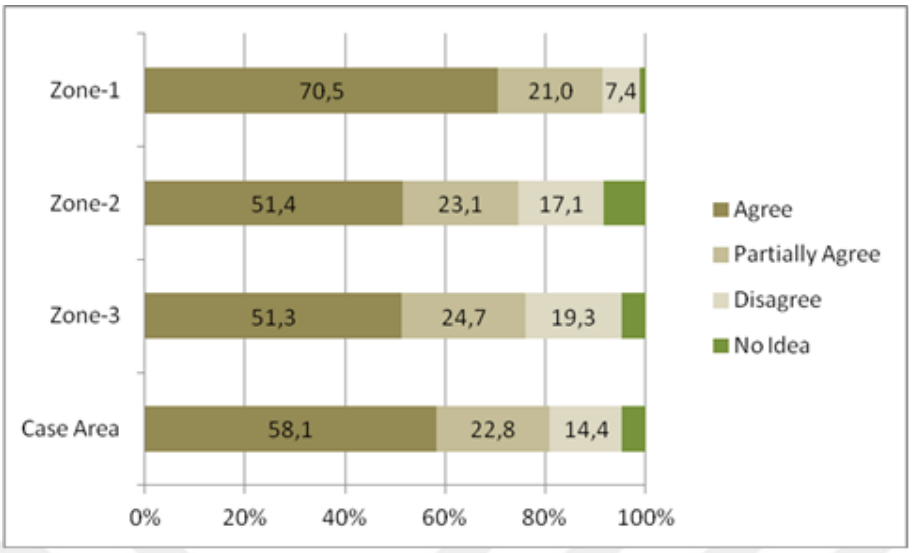


Figure 5.44. The outcome of Question 26 "whether It is easy to reach by bus or minibus to the Coastal Park " in Summer 2019.

The other question is *" whether it is easy to reach by private car to the Coastal Park "*. In Fall 2018, the half of users stated that they can easily access to the case study area by private car in Zone-1 and Zone-2 (Figure 5.45). However, in Summer 2019 compared to the fall term, the majority of users said that they can easily reach the area by their private car (Figure 5.46).

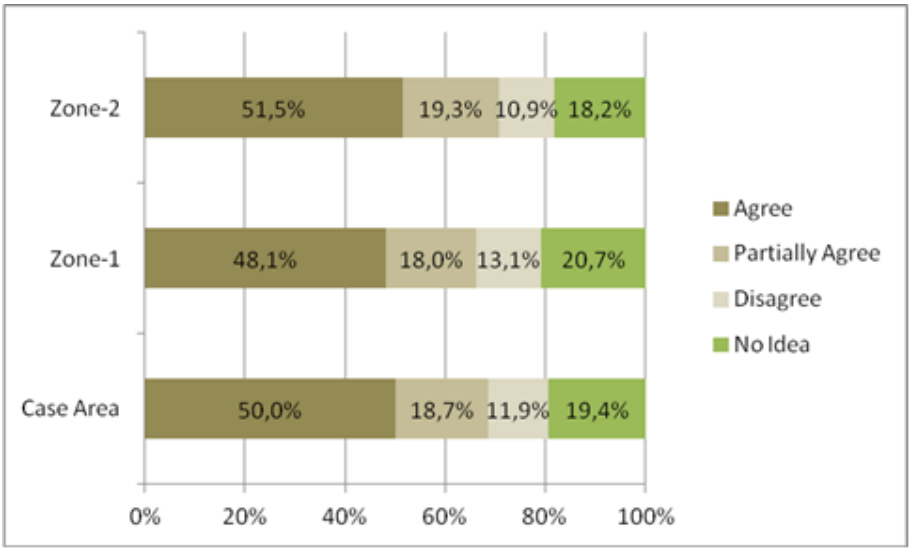


Figure 5.45. The outcome of Question 27 "whether It is easy to reach by private car to the Coastal Park" in Fall 2018.

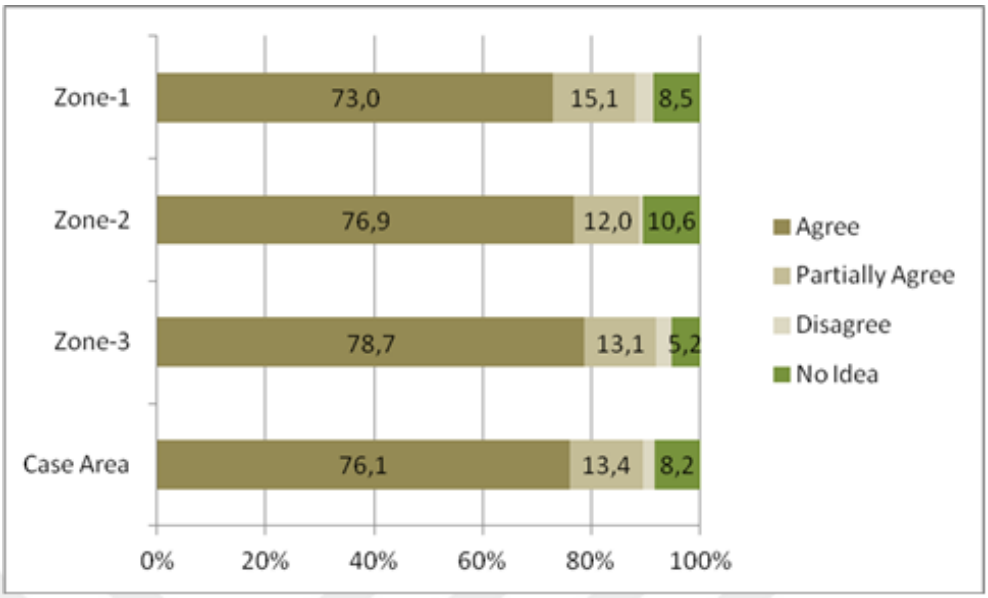


Figure 5.46. The outcome of Question 27 "whether It is easy to reach by private car to the Coastal Park" in Summer 2019.

The assessment of "the location of crossings along major roads" is another variable of accessibility in terms of outer factors. In the Fall 2018 survey, the one-third of respondents in both Zone-1 and Zone-2 partially agree that the locations of pedestrian crossings along the boulevard are easily accessible (Figure 5.47). On the other hand, according to Summer 2019 survey, the majority of respondents (74,6%) in Zone 2 and (66%) in Zone 1 stated that the pedestrian crossings along Adnan Menderes Boulevard are located on easily accessible places, on the contrary in Zone 3, the percentage of people who agree with this idea is below average (Figure 5.48).

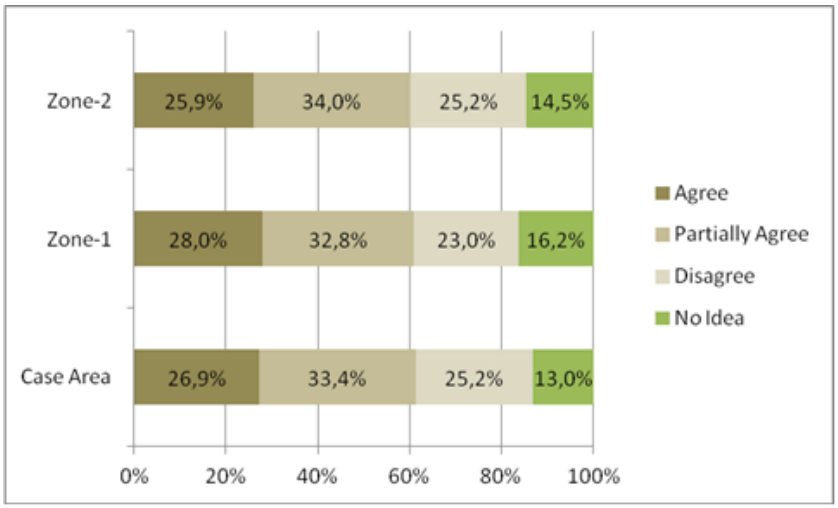


Figure 5.47. The outcome of Question 28 "whether the pedestrian crossings along Adnan Menderes Boulevard are located on easily accessible places" in Fall 2018.

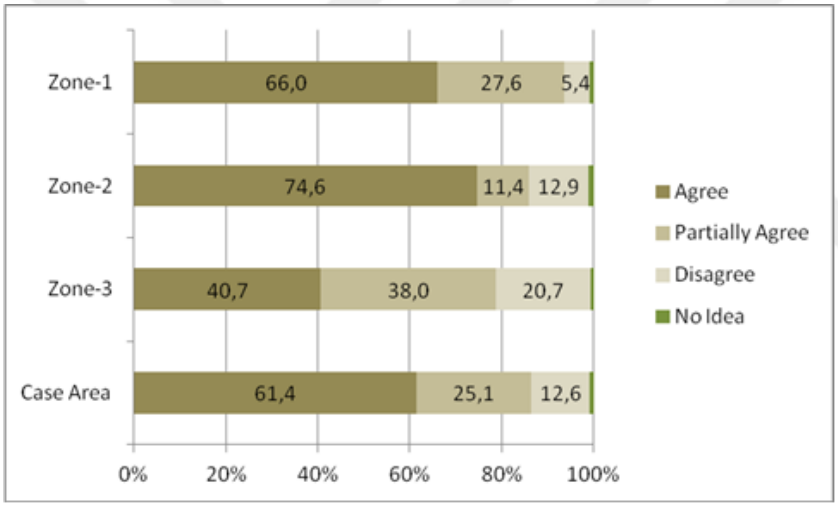


Figure 5.48. The outcome of Question 28 "whether the pedestrian crossings along Adnan Menderes Boulevard are located on easily accessible places" in Summer 2019.

5.1.2.3 General Assessment of Outer Factors for Mobility

As a result of general evaluation about accessibility of Mersin Coastal Park to determine outer aspects of mobility, there are different categories affecting zones. According to survey, private car is one of the main mode for accessing whole coastal park. In any case, Zone-1 is more accessible than other zones in terms of bike paths and public transport. Furthermore, according to the results of questionnaire, safety and

facilities for disabled and elderly groups are well established in Zone-1 comparing with Zone-2 and Zone-3. Zone-2 is more accessible than Zone-3 according to bike paths and walking. In sum, Zone-1 is the most and Zone-3 is the least accessible part of Mersin Coastal Park with public transport, walking and bicycle (Table 5.4 and Figure 5.49).

Table 5.4. Summary table for outer factors of mobility

			Zone-1	Zone-2	Zone-3
MOBILITY	**Outer**	*Impact zone*	*	-	+
		Accessibility	*	+	-

** Good*

+ Fairly good

- Poor

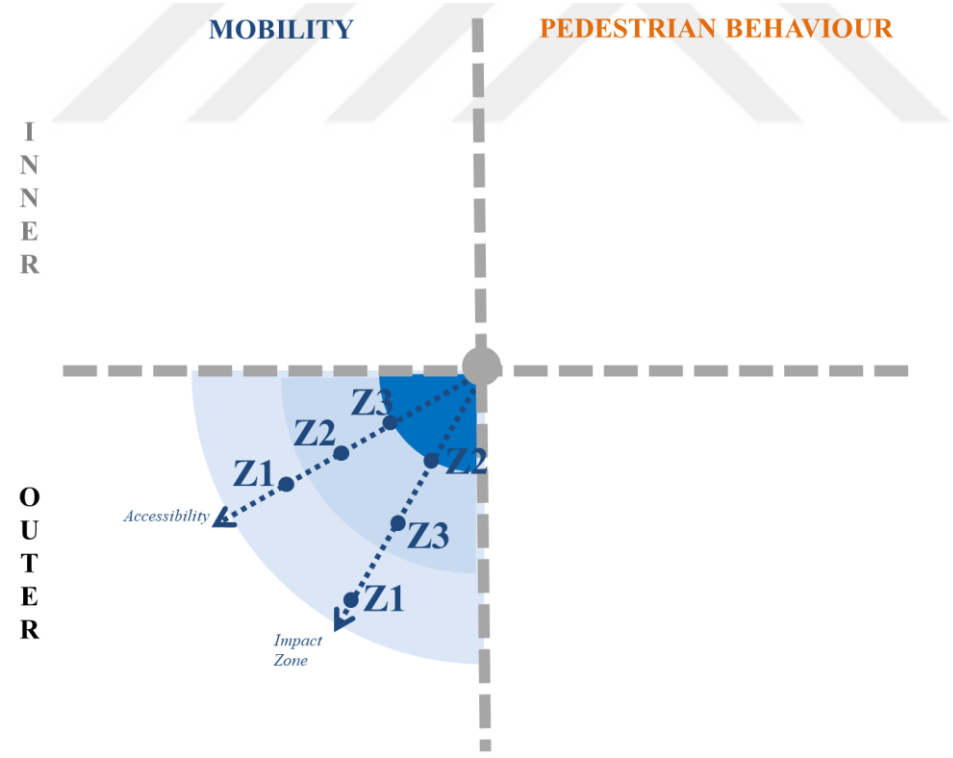


Figure 5.49. Outer indicators of mobility in making public space

5.2 The Evaluation of Pedestrian Behaviour in Mersin Coastal Park

Nowadays, there is increasing interest in understanding pedestrian behaviour. However, it is more difficult to estimate pedestrian behaviour than vehicle traffic, which is often analysed and estimated by quantitative systems. Pedestrians often have a free environment for movement and complex behaviour. Therefore, simulation of pedestrian behaviour is a difficult issue. Perhaps it is more enthusiastic to estimate pedestrian flow along paths than pedestrians in public space through various activities. Therefore, space-syntax approaches do not work within differences in perceptions such as squares or recreation areas. Therefore, different pedestrian behaviours emphasize a social sphere defined as the interaction of individuals who share a moment in the same field, and will be examined within a variety of factors determined by the public space or pedestrian those have mutual relation. In defined context, pedestrian behaviour is examined with inner factors emphasizing personal characteristics and outer factors affecting pedestrians.

5.2.1 Inner Factors of Pedestrian Behaviour

5.2.1.1 Perceived Safety of Mersin Coastal Park

Being able to use safe streets, parks, squares is a prerequisite for creating attractive, living cities for people. In other words, it is clear that a sense of safety is possible with attractive and vital spaces.

For the assessment of perceived safety in terms of inner factors of pedestrian behaviour, two related questions were asked to the users in the case study area. The first question is "whether night lighting is sufficient in the case study area". Regarding this statement, in Fall 2018 less than half of the users approved that night lighting is sufficient in both Zone 1 and Zone 2 (Figure 5.50). Also, according to Summer 2019 survey, majority of respondents, especially in Zone-2, claimed that the case study area is a well-lit area at night (Figure 5.51).

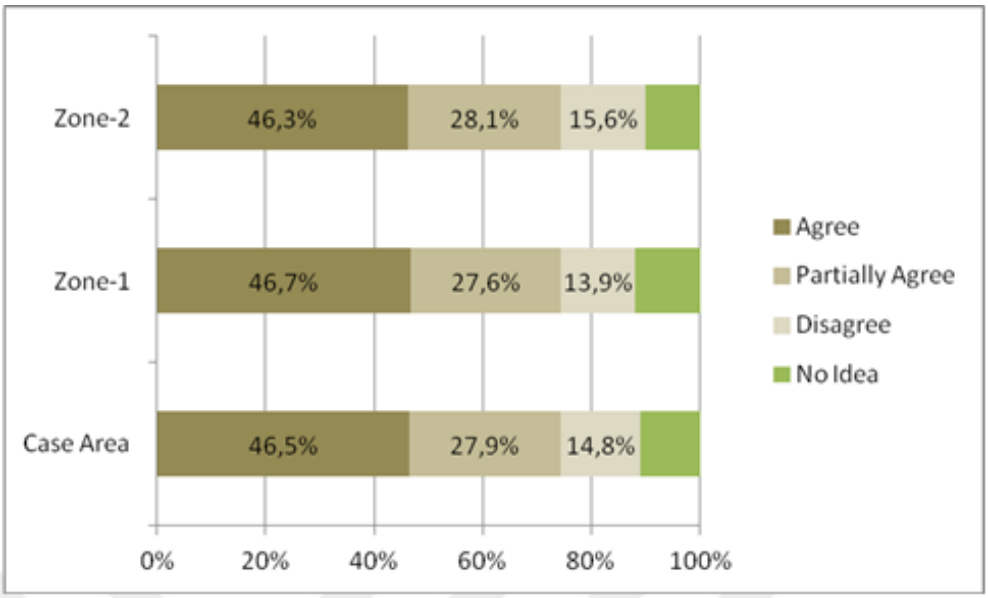


Figure 5.50. The outcome of Question 21 "whether night lighting is sufficient in the case study area" in Fall 2018.

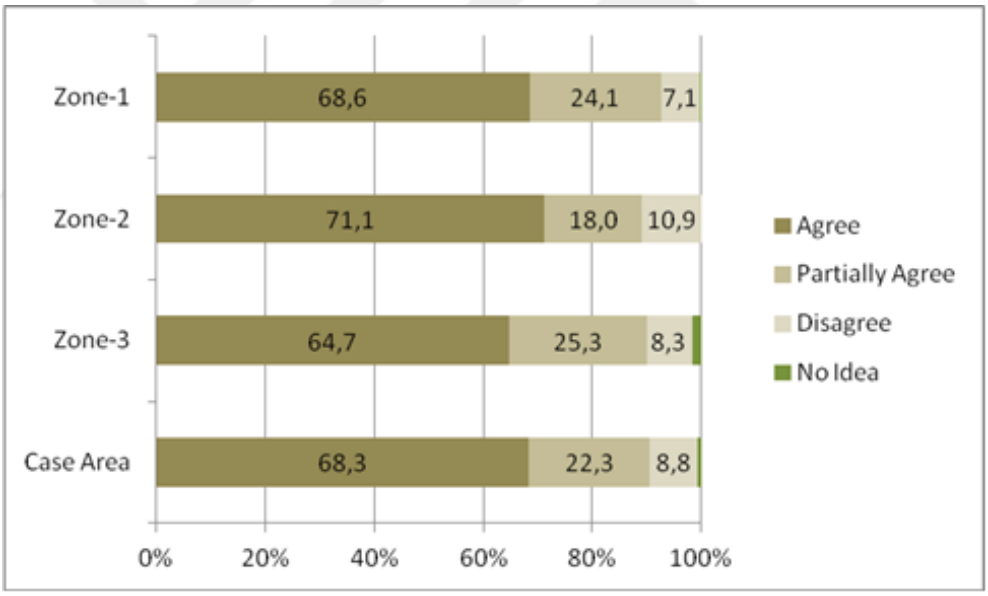


Figure 5.51. The outcome of Question 21 " whether night lighting is sufficient in the case study area" in Summer 2019.

The second question of perceived safety is " whether I feel safe in the case study area". In Fall 2018 survey, approximately 40% of respondents agree and 38% of respondents partially agree the statement related with feeling safe in Zone-1 and Zone-2 (Figure

5.52). However, in Summer 2019 survey, in Zone-2, users who feel safe in the area remain below average with 28.9% (Figure 5.53).

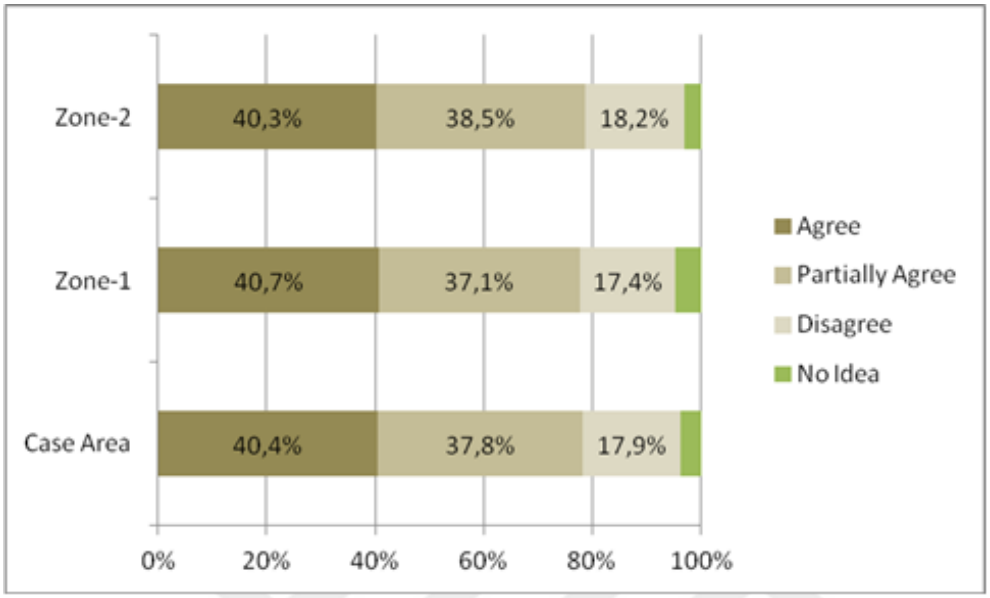


Figure 5.52. The outcome of Question 29 " whether I feel safe in the case study area" in Fall 2018

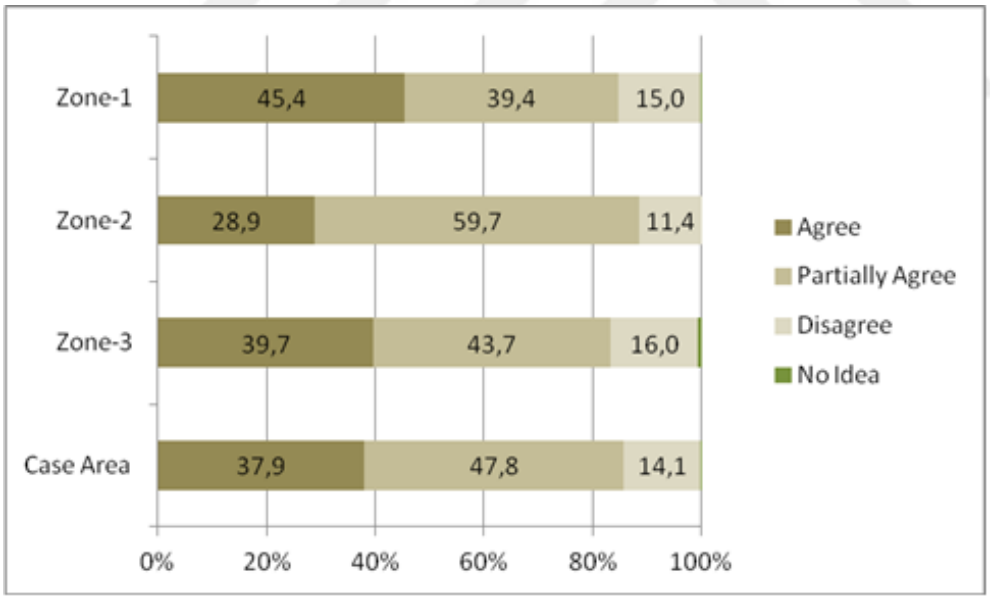


Figure 5.53. The outcome of Question 29 " whether I feel safe in the case study area" in Summer 2019

5.2.1.2 Cultural Preferences in Mersin Coastal Park

The 'public' in public space is not a coherent unified group, but instead a fragmented society of different socio-economic, cultural groups, beyond divided by age and gender (Carmona et al, 2008, 43). In this context, the fragmented structure, such as cultural preferences, personal characteristics, age and gender, has an important role in the use of public space.

Survey questions related with socio-demographic character were asked to identify the user profile of the case study area in terms of gender, age, occupation, educational status, number of household, household income, place of living and visiting frequency.

The Coastal Park serves approximately one million population of the Metropolitan Area of Mersin. Since the beginning of Syrian civil war, there is a significant Syrian immigrants living permanently and using the Coastal Park. Actually, the immigrants would be a chance to evaluate impacts of cultural preferences by comparing local people. However, because of political context, expectations and daily routines are so different than locals. Therefore, personal characteristics of respondents in the case study area are evaluated.

In this context, in order to assess cultural preferences, the responses of the related questions, *age, gender, education level, occupation, household size, number of workers in household, household's monthly income, where they live in Mersin, housing type, ownership of housing, how long they have lived in Mersin, where they come from, who you are coming with*, were analysed to evaluate the effect of the personal characteristics to making public space.

According to socio-demographic characteristic analysis, majority of the 2018 Fall survey participants were male (male to female proportion was 53% to 47%) and the majority of the 2019 Summer survey respondents were female (female to male proportion was 54,7% to 41,7%) (Figure 5.54/55)

In the fall period at 2018, there was a young population 53.9% of the respondents (16-34 years old), 34.9% of the middle-aged (35-59 years old) and 11.2% were elderly groups. In the summer 2019 survey, 34.1% of the participants were young people (16-34 years old), 40.8% of the middle-aged (35-59 years old) and 11.2% of respondents were belonging to elderly groups (+65 years) (Figure 5.54/55).

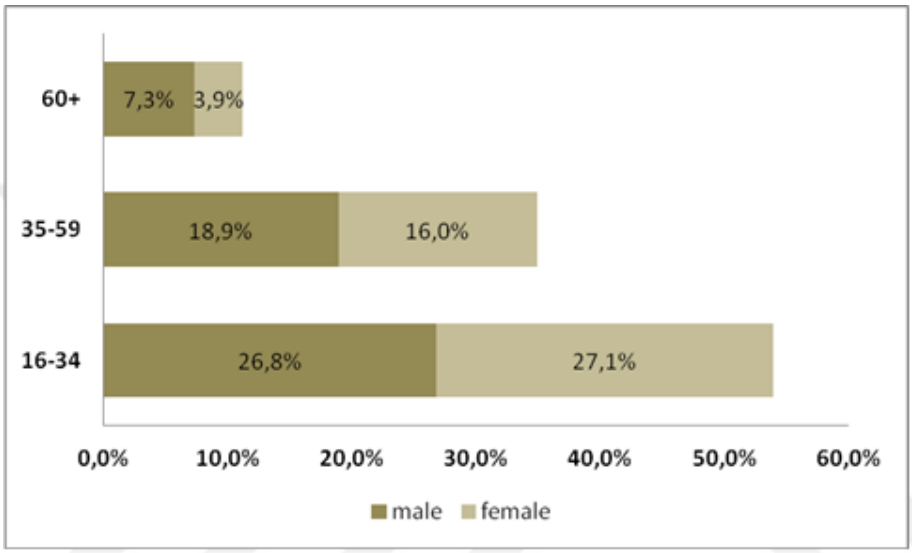


Figure 5.54. Distribution of respondents according to age and gender in Fall 2018

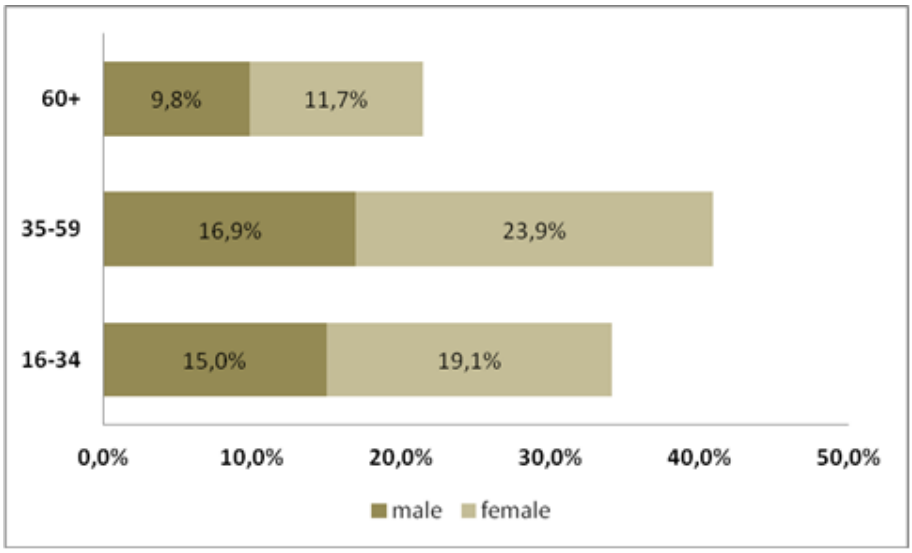


Figure 5.55. Distribution of respondents according to age and gender in Summer 2019

The education level of users is shown in Figure 5.56 and 5.57. More specifically, in Fall Questionnaire, more than half of users (%54.2) have university graduates level, approximately one-third of users have high school degree, 9.4% of users have secondary level and 3.3% of users are illiterate (Figure 5.56). In Summer Survey, approximately half of the users (47.4%) have university graduates level, 28.1% of users have high school level, 13.7% of users have secondary school level, 7.5% of users have primary school level, and 3.3% of users have no education (Figure 5.57).

It is seen that the education level of the users was generally high. Many users were students and working people. One of the reason is that the two Mersin University Campuses, Yenişehir and Çiftlikköy are rather close, so that the case study area is popular for lunch breaks and after school in favourable weather conditions. It was also observed that many high school students came in the afternoon after school, whereas many retirees came in the morning.

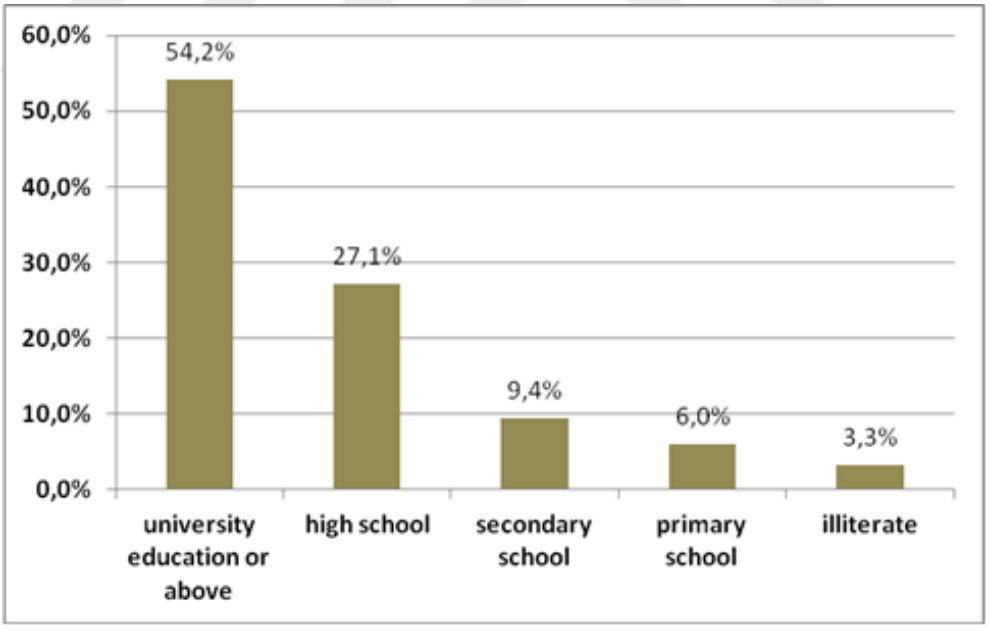


Figure 5.56. Distribution of respondents according to education level, in Fall 2018

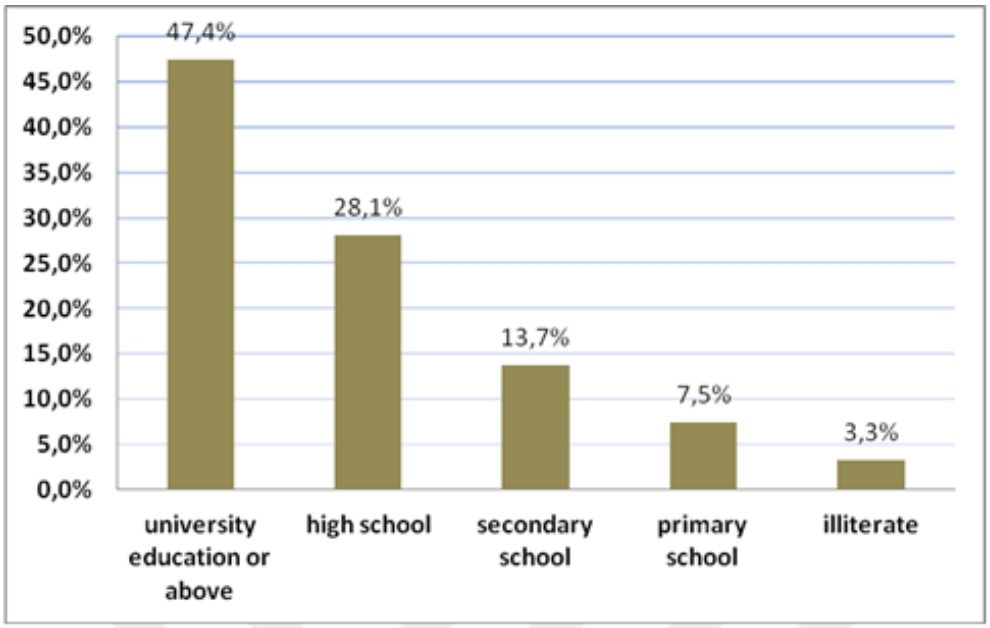


Figure 5.57. Distribution of respondents according to education level, in Summer 2019

Furthermore, more specifically, the respondents consist of various occupations; students (24,8%), retirees (15,4%), housewives (9,0%), shopkeepers (4,2%), officers (3,5%), unemployed (3,2%), teachers (2,2%), engineers (1,9%), waiters (1,6%), self-employed (1,6%). Yenişehir Campus of Mersin University is close to the case study area, so students use the area extensively. In addition to this, the case study area is accessible by a single public transport from the Çiftlikköy Campus. The area is especially preferred by retirees, the biggest reason for this is that the area is one of the few promenade areas in Mersin. Another reason is that free public transport to retirees (Figure 5.58).

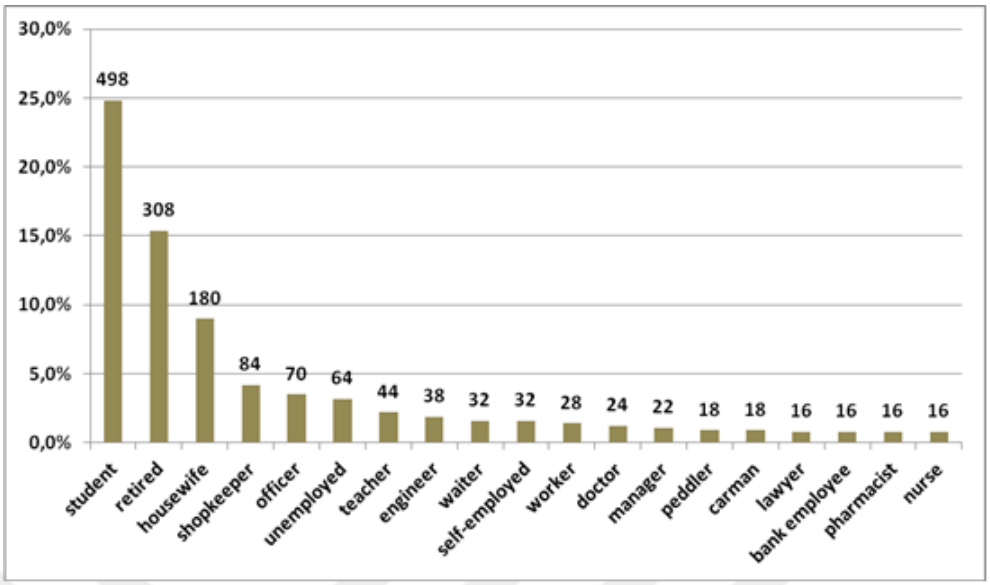


Figure 5.58. Distribution of respondents according to occupation, in Summer 2019

Other questions asked to reveal socio-demographic characteristics are household size and number of workers in household. Distribution of respondents according to household size, in Summer 2019 reveals that usually the size of the household is 4 people, followed by the size of the number of 3 people and 5 people. According to crosstabulation of Question 5a and 5b, household size of Crosstabulation of household size and number of workers per household data show that household size is generally 4 and number of active workers in families is 2 (Figure 5.59 and Table 5.5).

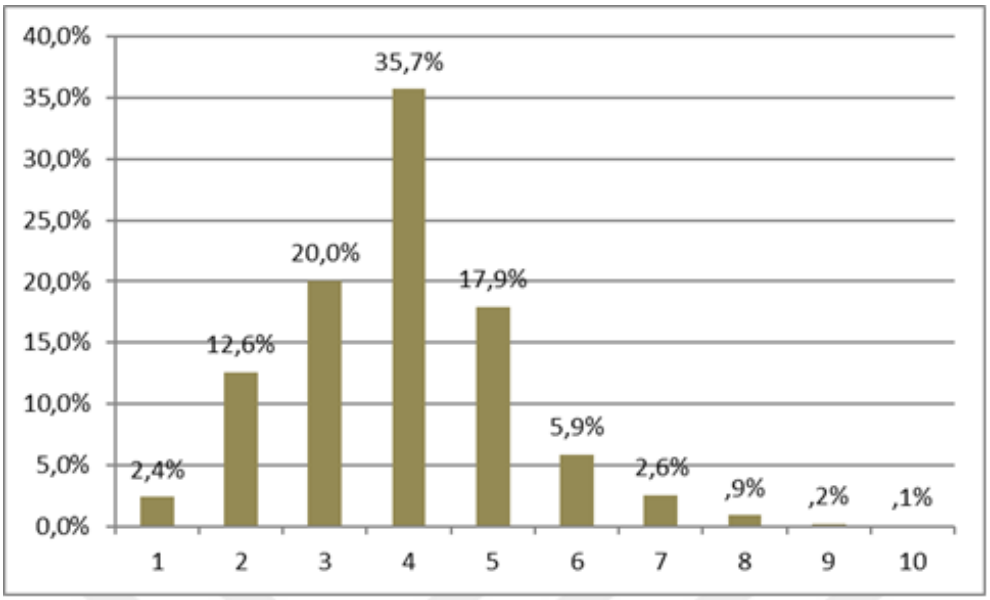


Figure 5.59. Distribution of respondents according to household size, in Summer 2019

Table 5.5. : The crosstabulation of household size and number of workers in household, in summer 2019

5b. number of workers in household					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		200	10,0	10,0	10,0
	0	8	,4	,4	10,4
	1	536	26,7	26,7	37,1
	2	1044	52,0	52,0	89,1
	3	174	8,7	8,7	97,8
	4	40	2,0	2,0	99,8
	5	4	,2	,2	100,0
	Total	2006	100,0	100,0	

In addition to the size of households and active person in family, general income of users indicates that, mid income groups prefer to use Mersin Coastal Park for recreational activities (Figure 5.60). Furthermore, most of the users are settled nearby neighbourhoods like Viranşehir, Pozcu and Eğriçam. It also indicates the role of pedestrian movement in making public space (Figure 5.61).

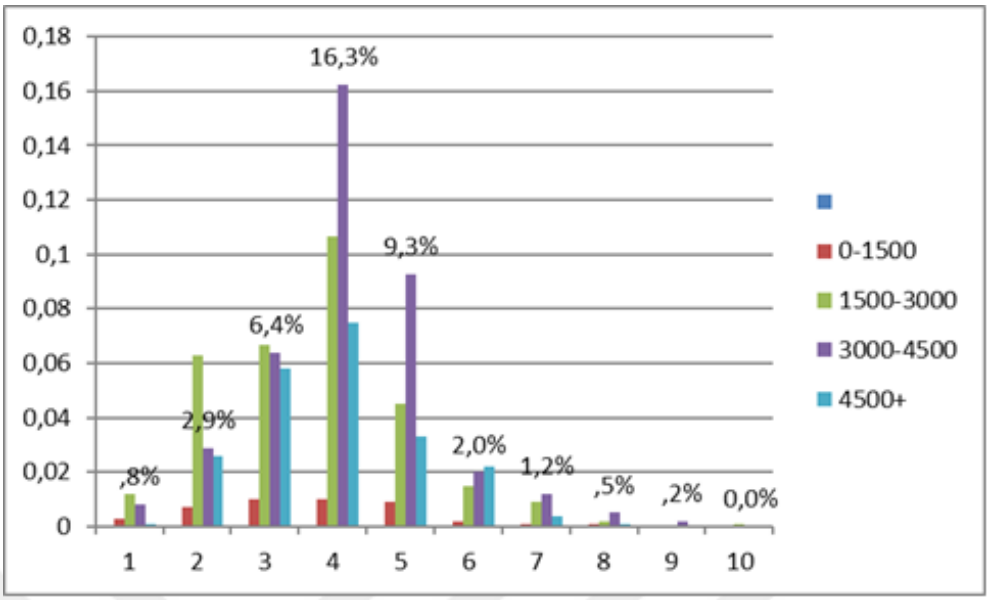


Figure 5.60. Distribution of incomes of users

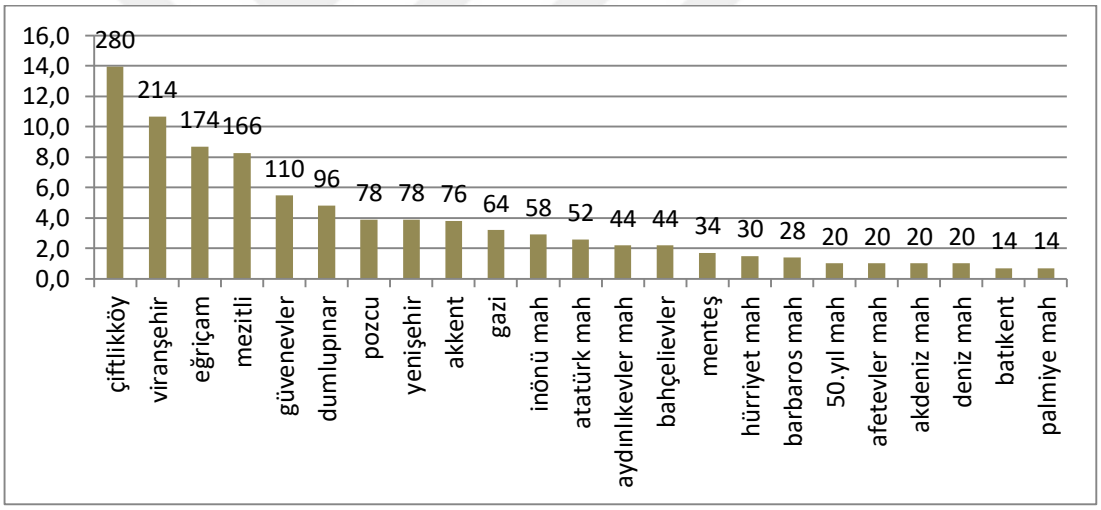


Figure 5.61. Where do you live in Mersin (neighbourhoods)?

After item by item assessments of personal characteristics, crosstabulations are prepared for the results of questionnaires to evaluate whether personal characteristics have an impact on their basic expectations or needs, or not? In Appendix-C, recreational facilities, services, safety and accessibility are re-evaluated according to gender, age and sub-zones. The crosstabulations indicate homogenous results with general results of the questionnaire. In other words, satisfaction and expectations of

user are similar in different zones. On the other hand, the crosstabulations indicate different using patterns and frequencies of local people according to their age and gender that is discussed in the following section.

In this context, when we make an evaluation in terms of personal characteristics, it is seen that the Mersin Coastal Park has gained the quality of public space, especially by the people living in nearby vicinity. As the public space is a free sphere for people of different character, by definition, it would not be appropriate to make a comparison between sub-regions in terms of cultural characteristics. However, the use of the coastline by people of different character increases the publicity of the area.

5.2.1.3 Time Factor in Mersin Coastal Park

Time is a crucial component of pedestrian behaviour as an inner factor. Changes in hour, day, week, season and the perception of time are the variables to assess the time factor indicator. In order to reveal the impact of time factor in making public space process, field study and survey were done.

In the study, three related questions were asked to the users in the Coastal Park of Mersin. The first question is "how often you come to the case study area", the second is " how much time you spend in the case study area ". and the last one " What is your most preferred time to come to the area?".

Regarding the first question, in Fall 2018, approximately one-third of users come to the case study area 1-2 times a month, similarly one-third of respondents come to the area 1-2 times a week in both areas. However, time factor component varies according to season, that is to say, approximately one-third of users come to the case study area 1-2 times a week and unlike Fall 2018 survey, approximately one-third of respondents come to the area 3-4 times a week, in Zone 1 and 3, and in Zone 2, two-fifth of users come to the area in summer. Zone 2 is above the average in the use of the area (Figure 5.62/5.63).

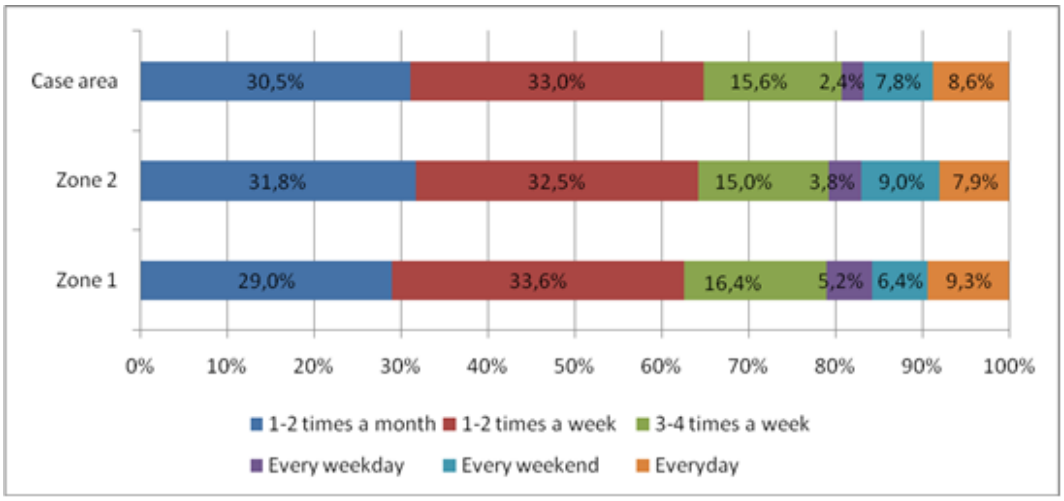


Figure 5.62. The outcome of Question 10 " how often do you come to the case study area? ", in Fall 2018

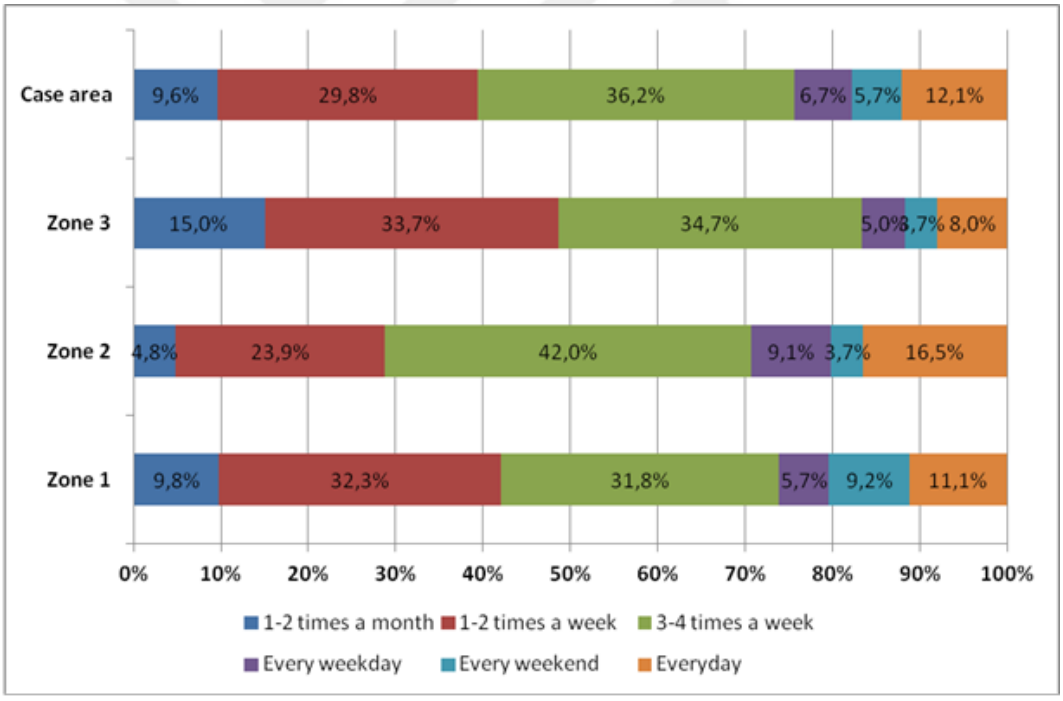


Figure 5.63. The outcome of Question 10 " how often do you come to the case study area? ", in Summer 2019.

The second question is "how much time you spend in the case study area". Regarding this statement, in Fall 2018 approximately half of users claimed that they spend 1-2

hours when they come to the case study area. Also, according to Summer 2019 survey, 43 % of the users spend 1-2 hours and 38% of the users spend 3-4 hours in the case study area. When we compare the two different seasons especially in Zone 2, users spend more time in summer compared to fall (Figure 5.64/5.65).

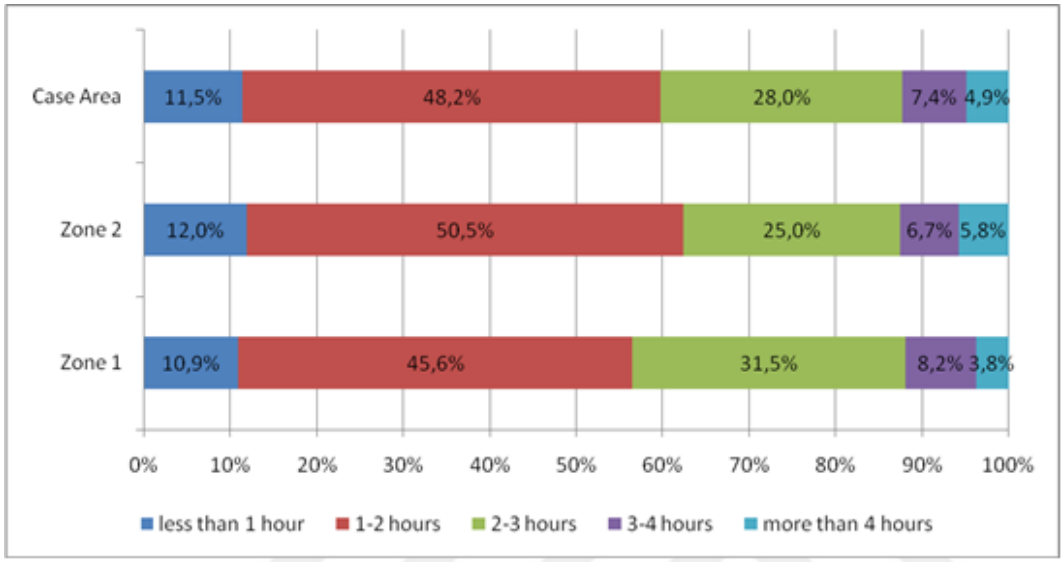


Figure 5.64. The outcome of Question 11 " how much time do you spend in the case study area?", in Fall 2018

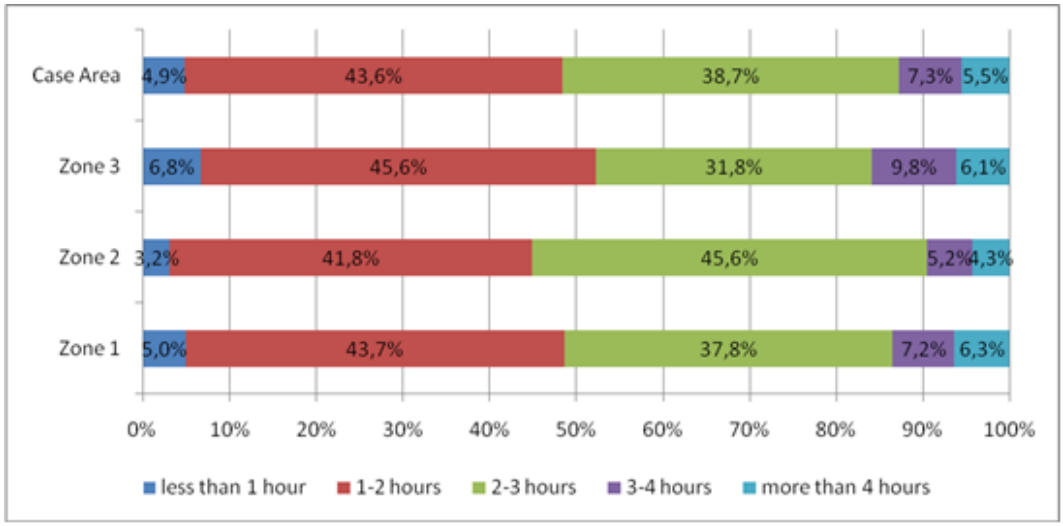


Figure 5.65. The outcome of Question 11 " how much time do you spend in the case study area?", in Summer 2019

The other question set are related with time factor in Mersin coastal park that “What your most preferred time is to come to the area (Season / Day / Hour)”. The answers of questions show that in Fall semester 36,7 % of users come to the area at spring term followed autumn term with 29% while according to Summer survey, people prefers to come to the area at the summer term (33,7%) followed by spring term (30,4%). According to the fall survey, people use the area more on weekdays (34,8%) and Sundays (33,4%), when we look at the survey in the summer, weekends, especially on Saturdays (36,5%) are more preferred (Figure 5.66/67/68/69).

When we look at the most commonly used time interval in the case study area, the time between 16,00-19,00 hours is the most preferred time by users both two term. Besides, people prefer to use the Coastal Park after lunch time (14.00-16.00) in fall term, and they prefer to use this area between 19.00 and 24.00 o’clock in summer term. According to the all survey results, the least used time interval of the area is between 12.00 and 14.00 o’clock (Figure 5.70/71/72/73/74/75/76/77).

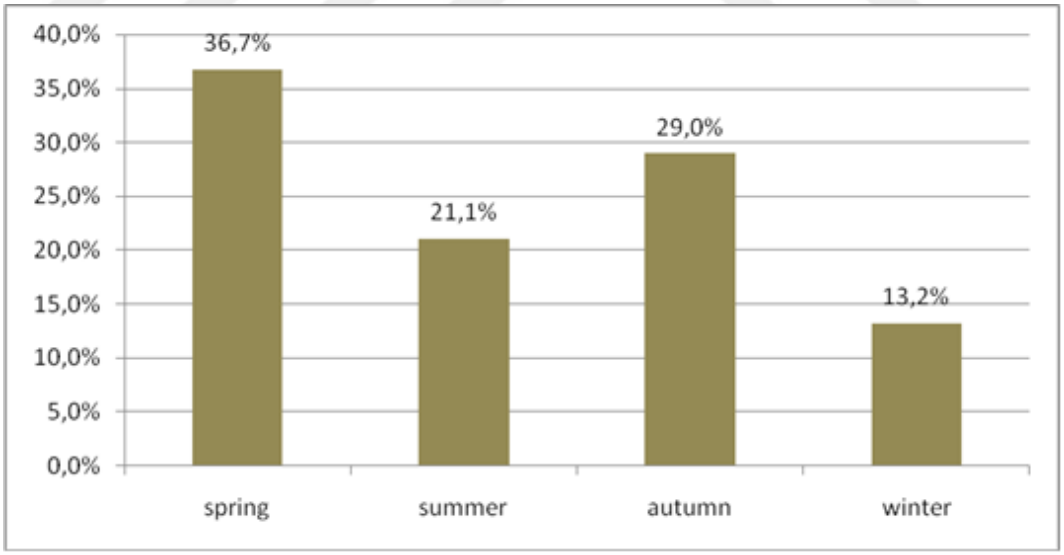


Figure 5.66. : The outcome of Question 13a “What is your most preferred time to come to the area (as season)" in Fall 2018.

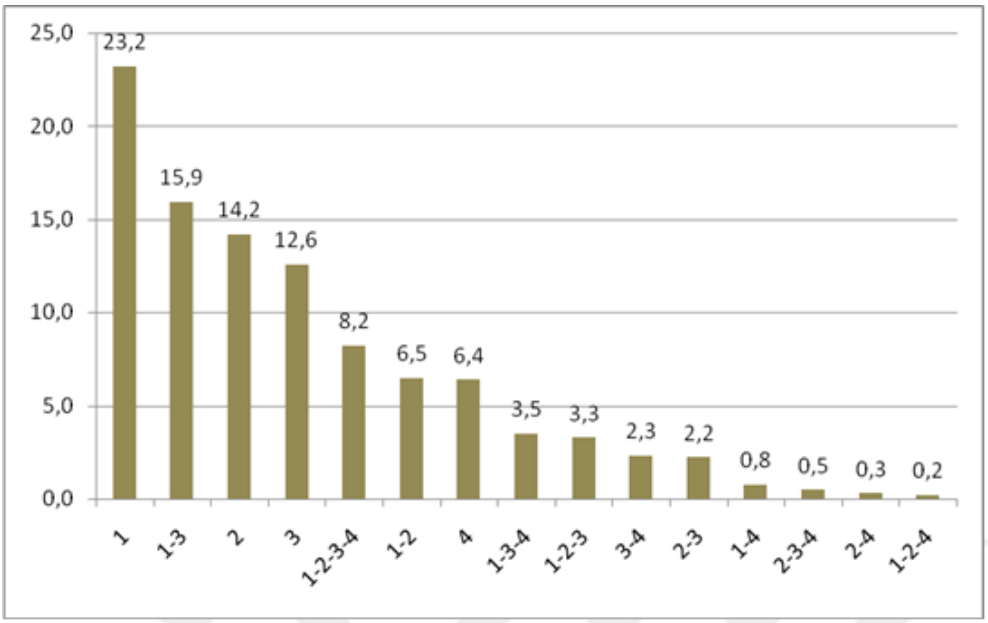


*Figure 5.67. : The outcome of Question 13a "What is your most preferred time to come to the area (as season) (%)" in Fall 2018. * 1-spring, 2-summer, 3-autumn, 4-winter*

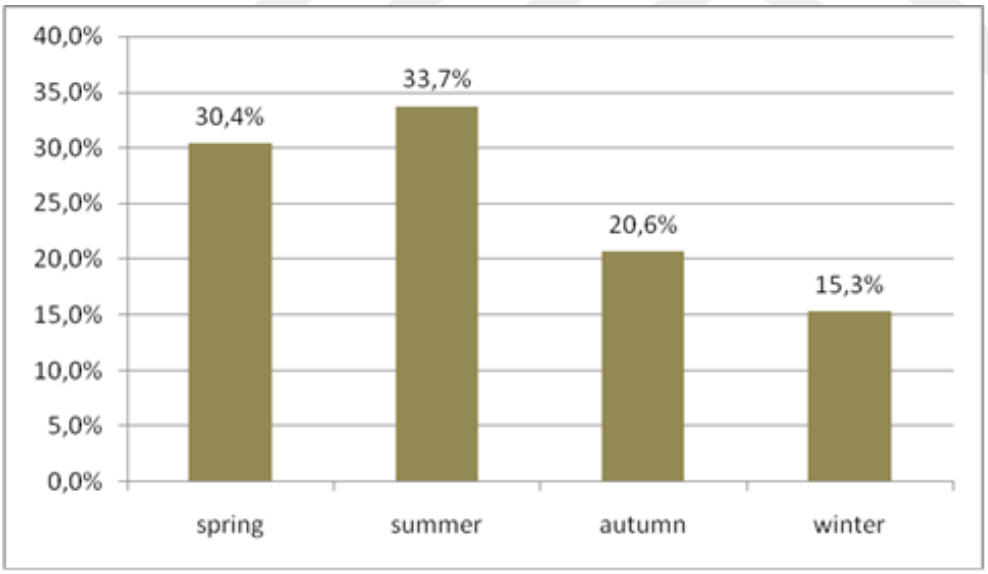


Figure 5.68. : The outcome of Question 13a "What is your most preferred time to come to the area (as season)" in Summer 2019.

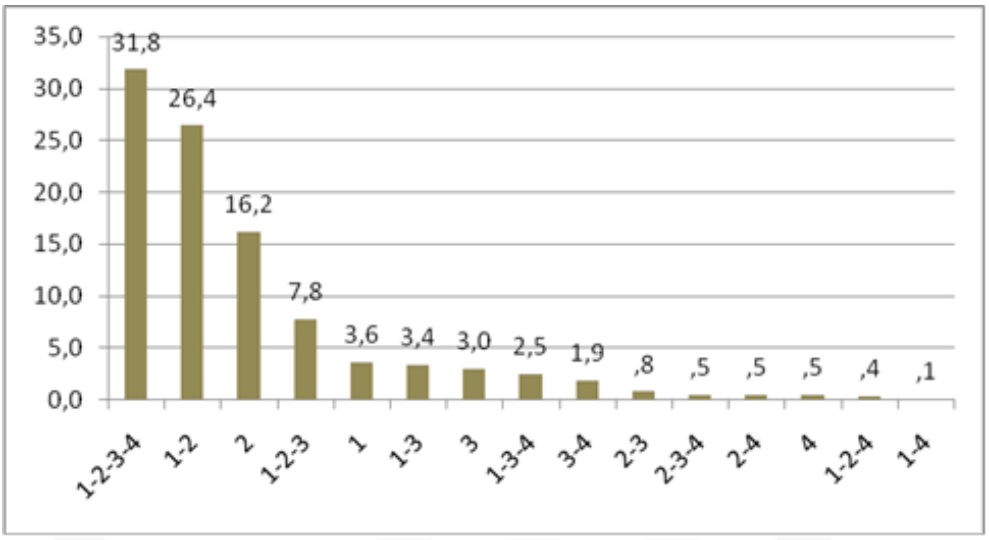


*Figure 5.69. : The outcome of Question 13a "What is your most preferred time to come to the area (as season)(%)" in Summer 2019. * 1-spring, 2-summer, 3-autumn, 4-winter*

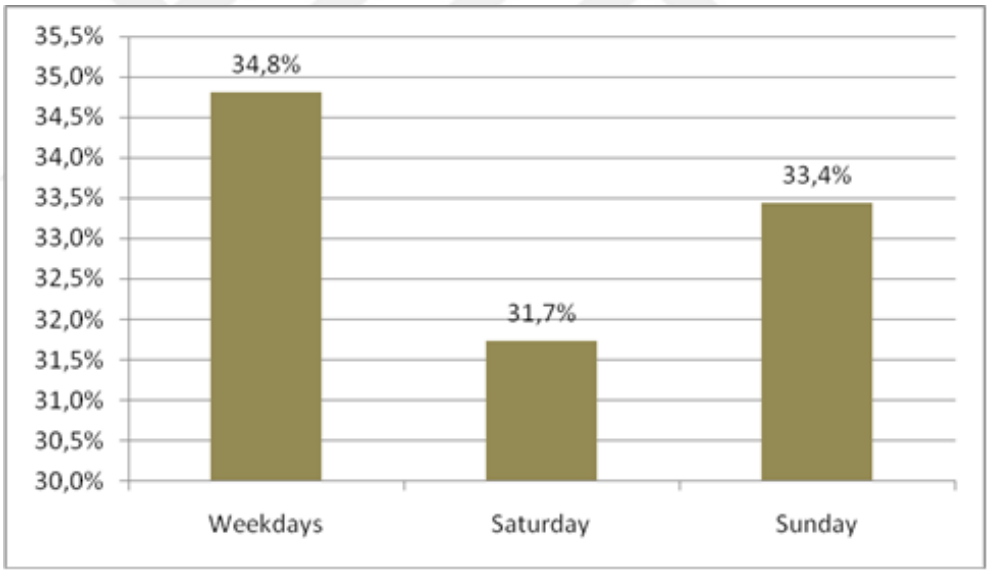


*Figure 5.70. : The outcome of Question 13b "What is your most preferred time to come to the area (as day)" in Fall 2018. * 1-weekdays, 2- Saturday, 3-sunday*

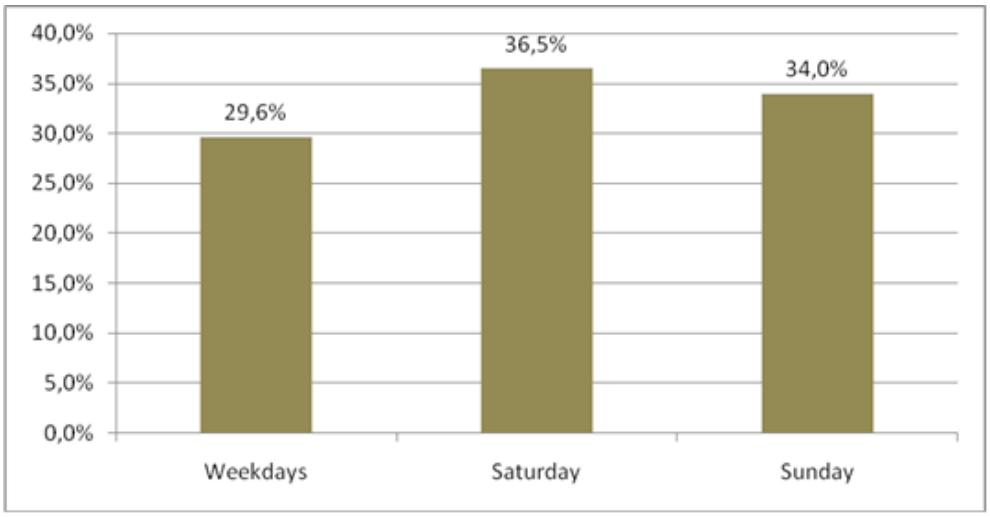


*Figure 5.71. : The outcome of Question 13b "What is your most preferred time to come to the area (as day)" in Summer 2019. * 1-weekdays, 2- Saturday, 3-Sunday*

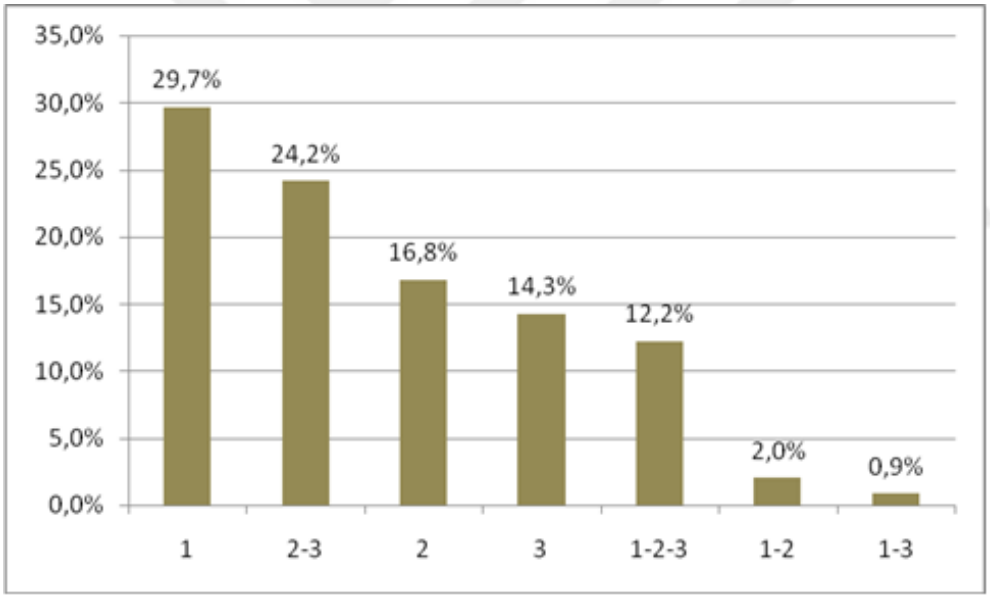


*Figure 5.72. : The outcome of Question 13b "What is your most preferred time to come to the area (as day)" in Fall 2018. * 1-weekdays, 2- Saturday, 3-sunday*

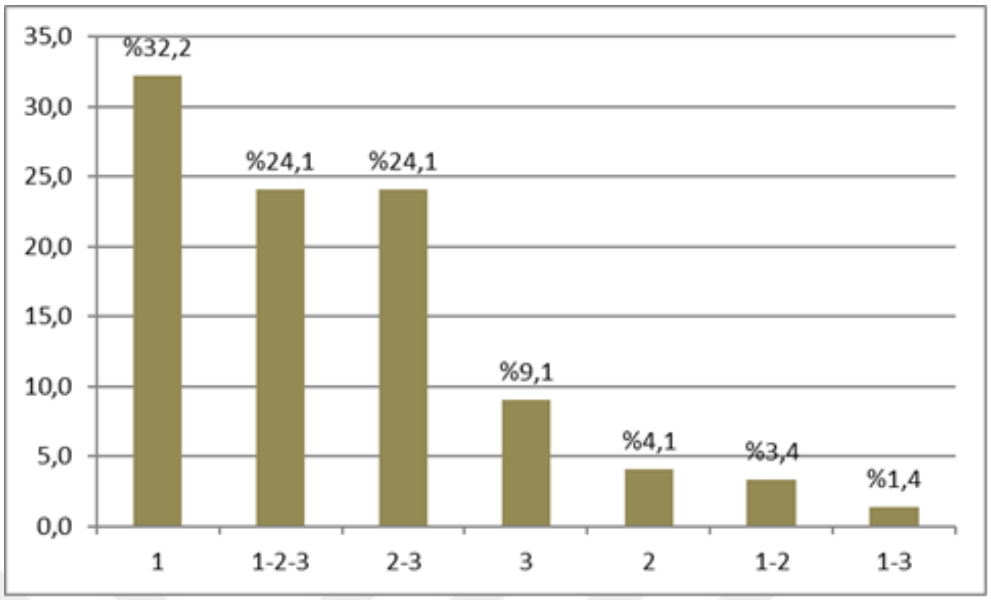


*Figure 5.73. : The outcome of Question 13b "What is your most preferred time to come to the area (as day)" in Summer 2019. * 1-weekdays, 2- Saturday, 3-Sunday*

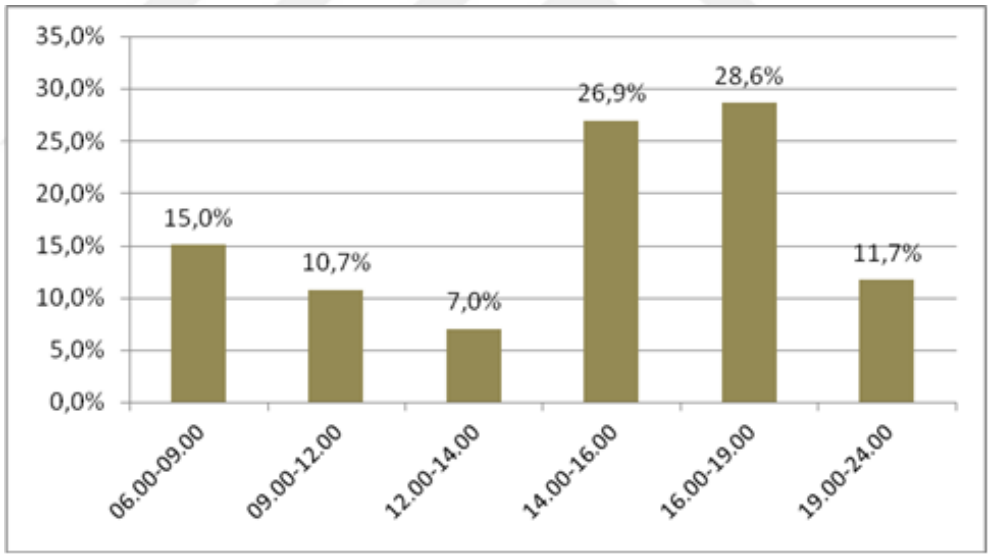


Figure 5.74. : The outcome of Question 13c "What is your most preferred time to come to the area (as hours)" in Fall 2018

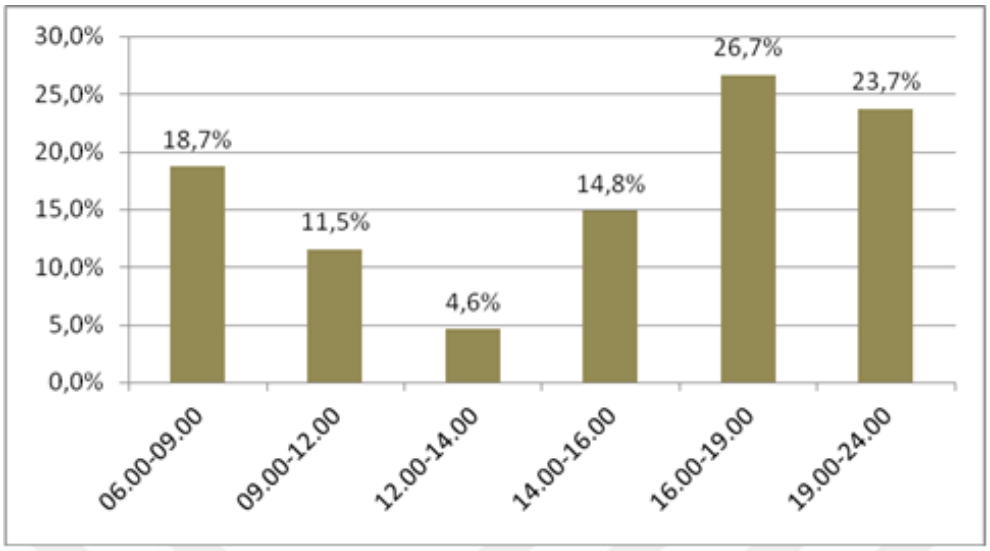


Figure 5.75. : The outcome of Question 13c "What is your most preferred time to come to the area (as hours)" in Summer 2019.

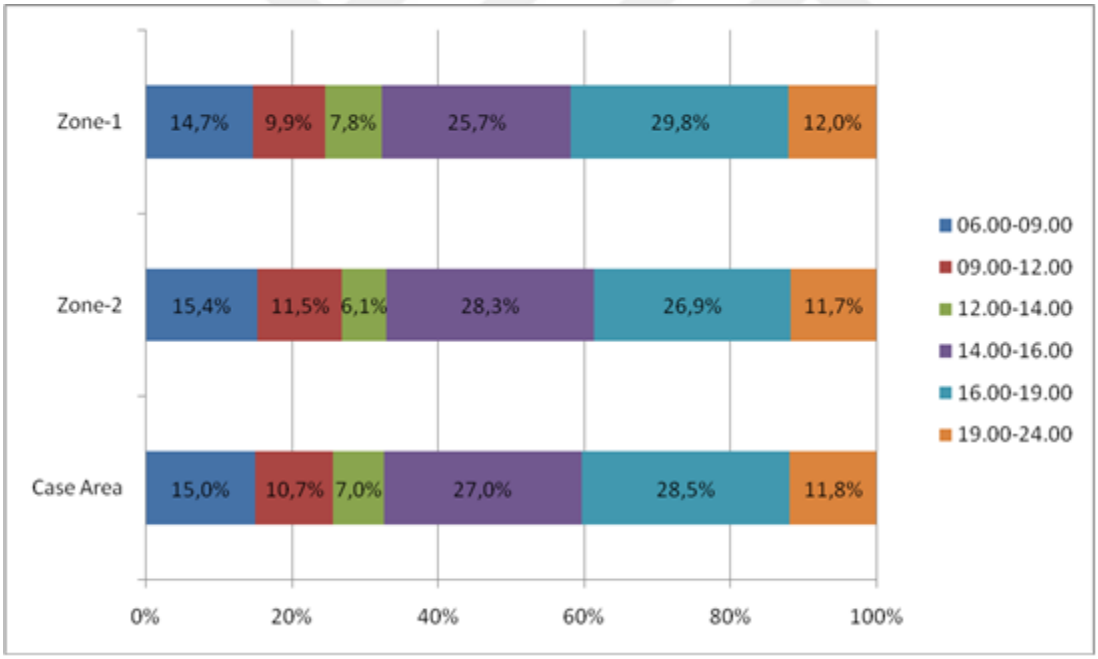


Figure 5.76. : The outcome of Question 13c "What is your most preferred time to come to the area (as hours)" in Fall 2018

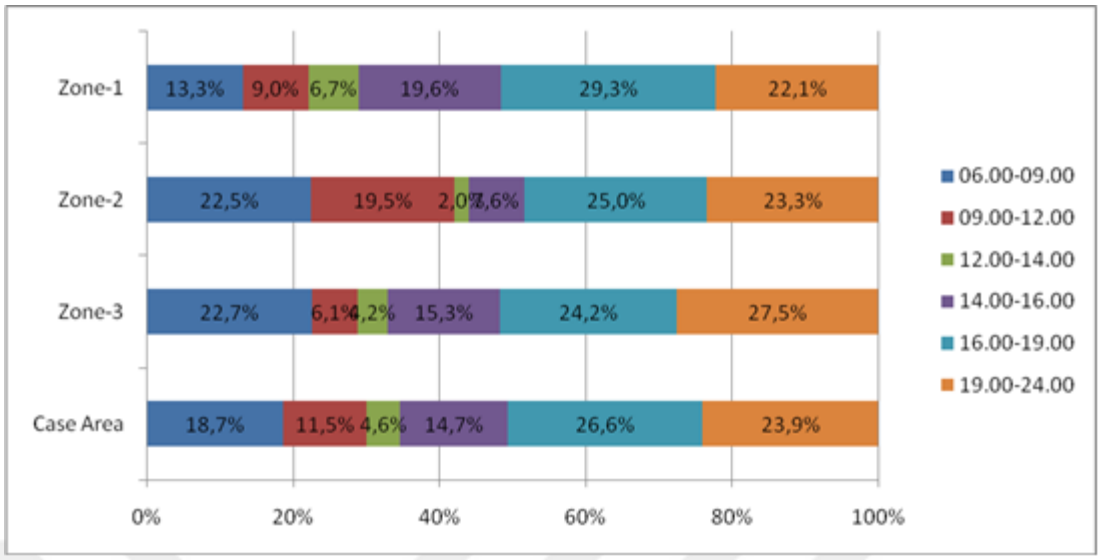


Figure 5.77. : The outcome of Question 13c "What is your most preferred time to come to the area (as hours)" in Summer 2019.

According to crosstabulation (Appendix-C) of Question 13c "What is your most preferred time to come to the area (as hours)" and gender and age of respondents, young males (16-34 years) prefer to use the Coastal Park afternoon and early evenings, while older males (34-59 and +60 years) prefer morning hours for probably sport activities. For female, just +60 years use the Coastal Park in the morning.

5.2.1.4 General Assessment of Inner Factors of Pedestrian Behaviour

As a result of aforementioned results and discussions about perceived safety, personal characteristics and time factor, an evaluation would be made for the role of inner factors of pedestrian behaviour in making public space. In terms of perceived safety, Zone-1 and Zone-2 are equally safe because of night lightening, but Zone-3 has problem for nights. On the other hand, users feel safe in Zone-1 and Zone-3 than Zone-2. For personal characteristics, Mersin Coastal Park is preferred by people living in nearby vicinity from different age groups, income and gender. It is a characteristics or publicity of public spaces. Therefore, making a comparison between different social groups is not fair a recreational public space. In terms of time factor, the most of users

prefer to come to the case study area in good weather conditions and out of working hours, because of recreational facilities. When comparing sub-zones, users use Zone-2 more often and spends longer time compared to other zones. After Zone-2, Zone-1 is the most preferred one (Table 5.6 and Figure 5.78).

Table 5.6. Summary table for inner factors of pedestrian behaviour

			Zone-1	Zone-2	Zone-3
PEDESTRIAN BEHAVIOUR	**Inner**	*Perceived Safety*	*	-	+
		Cultural Preferences	+	+	+
		Time Factor	+	*	-

** Good*

+ Fairly good

- Poor

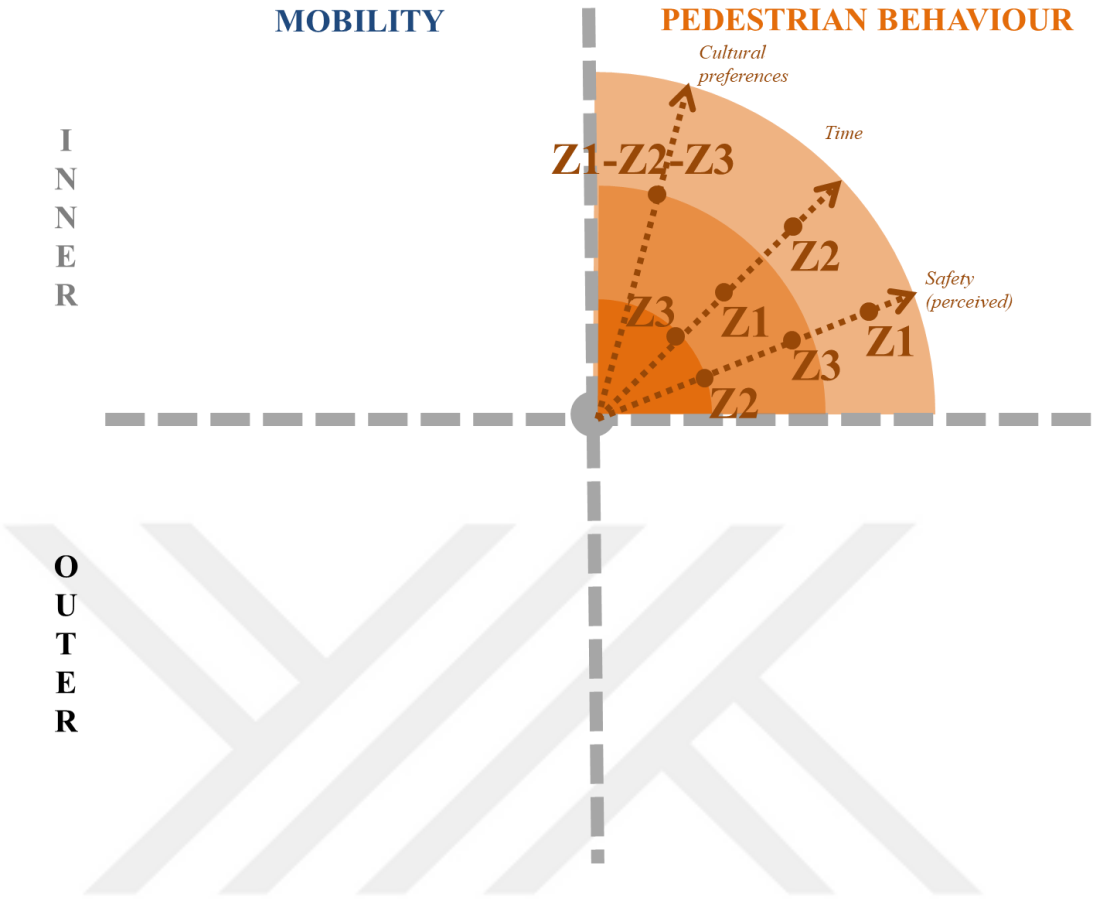


Figure 5.78. Inner indicators of pedestrian behaviour in making public space

5.2.2 Outer Factors of Pedestrian Behaviour

5.2.2.1 Physical Safety of Mersin Coastal Park

As discussed in perceived safety section, Zone-1 is safer than others according to users' feelings. On the other hand, physical safety is related with actual safety by design features and traffic calming measures (Lambert, 2005:78). Therefore, Jacobs (1995: 272) defines safety as permitting people to walk with a sense neither of crowding nor of being alone, but a balance with vehicular traffic. In defined context, Mersin Coastal Park has well-defined boundaries as a whole for vehicular traffic and pedestrian movement. There are walking paths linear to the Coastal Park, and the most of case study area is closed to vehicular movements. In any case, Zone-1 is a more

defined pedestrian zone compared to other sub-regions. Adnan Menderes Boulevard, which defines the boundary of case study area, disturb the relationship and especially pedestrian flow throughout the study area. However, in the western part of Zone-1, Adnan Menderes Boulevard turns north and joins Cengiz Topel Street (Figure 5.79).

Thus, Zone-1 differs from other areas in terms of physical safety. In addition, the traffic flow at the junction points in Zone-1 is largely controlled by traffic lights. Traffic lights are active at the junction points along Zone-2, too. However, at some important junctions in Zone-3, for example to the south of Dumlupınar High School, there is no control with traffic lights. Pedestrian crossings are provided where traffic lights are not available. However, especially in the morning and evening peak hours, pedestrian movement is limited in relation to working hours. The only point where the pedestrian flow and vehicle traffic directly cross the entire case study area is the entrance gate of the Marina. In this area, safety is provided by traffic lights (Figure 5.80).

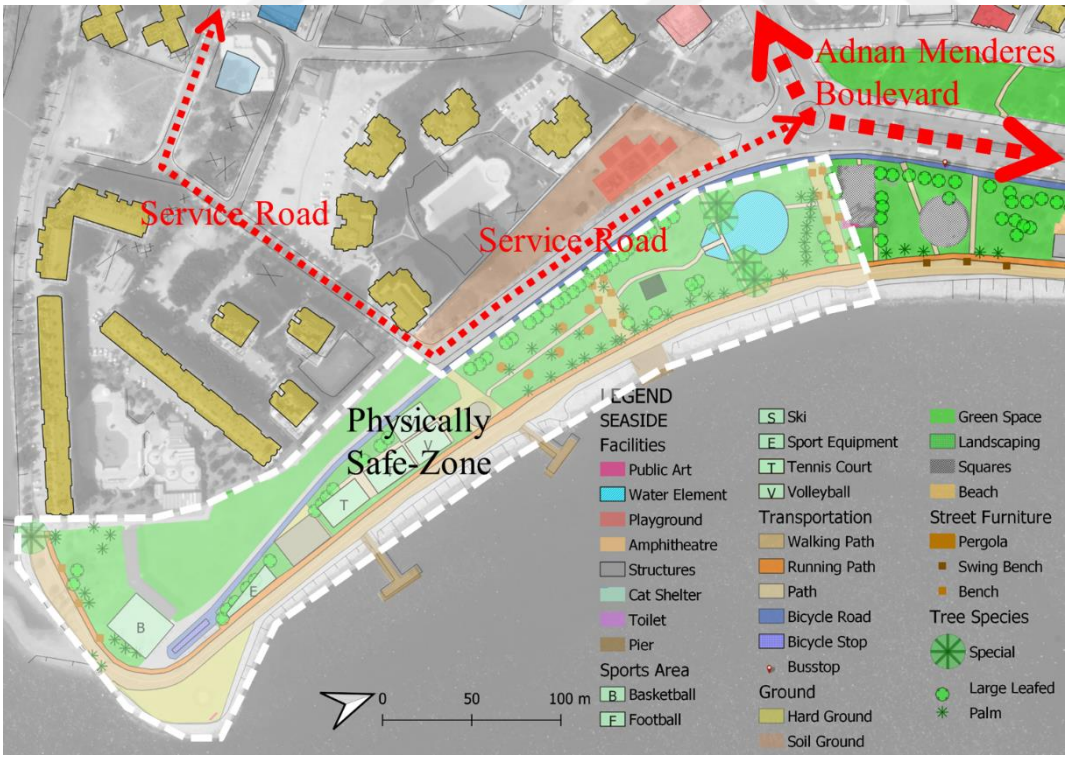


Figure 5.79. Physically safer part of Zone-1

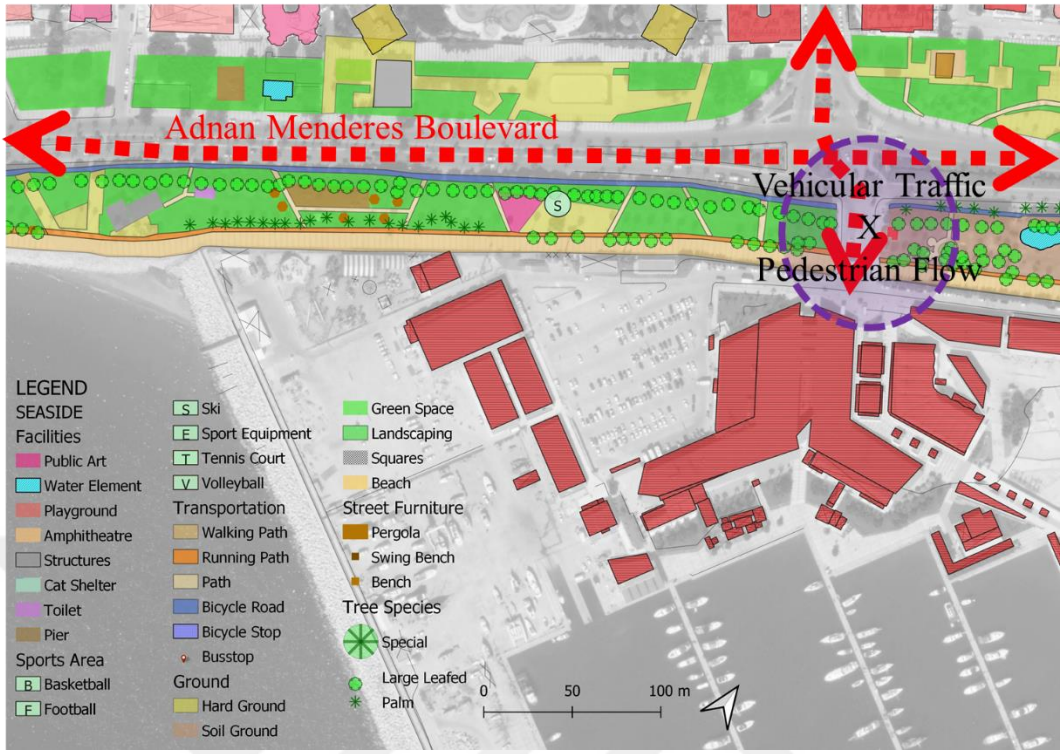


Figure 5.80. The entrance of Marine. Vehicular traffic and pedestrian flow

5.2.2.2 Connectivity of Mersin Coastal Park

Connectivity in the case study area can be evaluated in two ways, the first is the connection of the impact zone with the case study area and, the second is the connection within the case study area itself. According to street pattern of impact zone, the path network and the well-constructed and legible connection between the impact zone and coast create the ease of movement and the accessible axis to Coastal Park.

The results of the content analysis show that Zone 1 has at least 15 connections with Coastal Park by its nearby streets. In addition to streets and paths, Mezitli Stream and passages along it let a pedestrian flow from northern and western neighbourhoods (Figure 5.81).

Besides Zone 2 has less than 10 connections with the Coastal Park between Yenişehir campus and Marina (Figure 5.82). There are poorly designed street connections with the Coastal Park and impact zone.

Moreover, in Zone-3, intense and fast traffic arising from the Forum shopping mall and unsafe streets are the main problems in terms of connectivity. However, Kushimoto Street, where there are different cafes and gastronomic facilities, and foci like Muğdat Mosque and Archaeological Museum, the eastern part of Zone-3 has more potential than Zone-2 (Figure 5.83/84).

In sum, due to close relation with residential areas in Zone 1, usage of streets is more and qualified than other zones.

Figure 5.81. Connectivity of Zone-1 with its impact zone

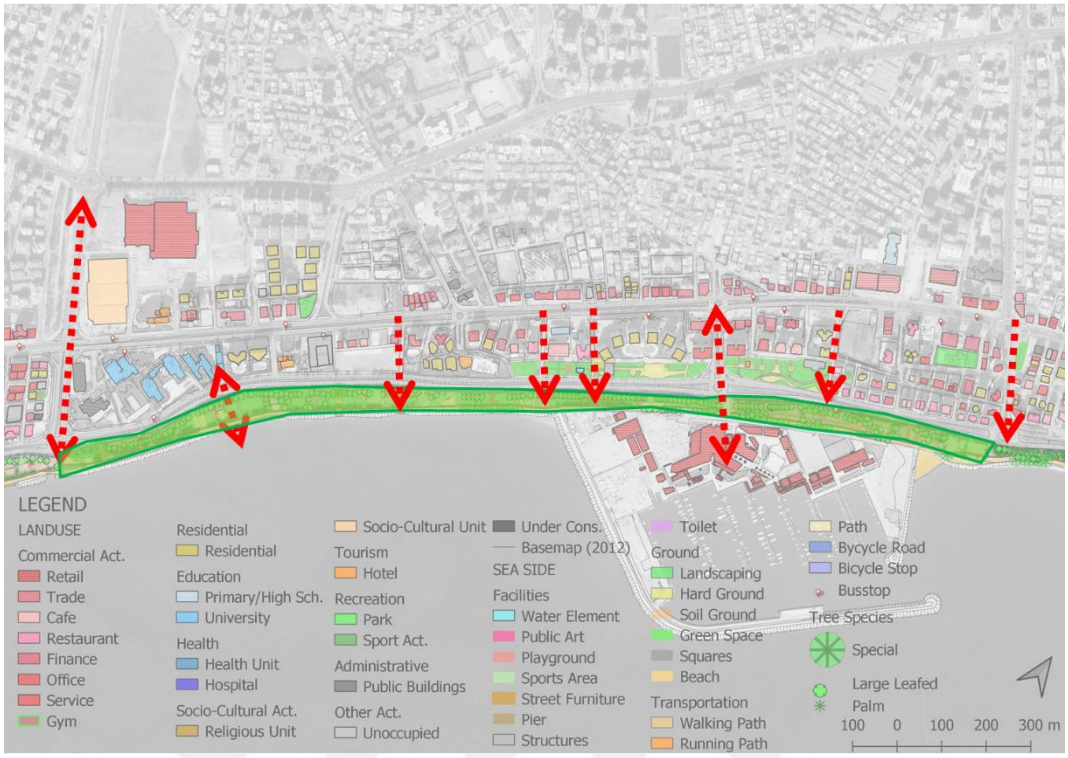


Figure 5.82. Connectivity of Zone-2 with its impact zone

Figure 5.83. Connectivity of Zone-3 (western part) with its impact zone

Figure 5.84. Connectivity of Zone-3 (eastern part) with its impact zone

In addition to this, well maintained and continuous pedestrian paths enhance the connectivity of public space for qualified usage. There is no topographic handicap in the entire case study area, due to a filling area. Another important issue for connectivity is the need for resting places between acceptable walking distances. Pedestrian paths should be designed for all ages, so there should be resting areas and service areas including amenities such as WC, coffee shop. at every 300-400 meters. According to direct observations in the case study area Zone 1 and Zone-2 include more resting areas and services/amenities than Zone-3. The connectivity of Zone-1 is relatively better than Zone-3 and Zone-3 is better than Zone-2.

5.2.2.3 Aesthetic Quality of Mersin Coastal Park

Users have aesthetic needs in public space and these needs are equivalent to the value in space. The aesthetic needs of the individual are beauty, symmetry and even simplicity and order, while for others, perceptual innuendo, unexpectedness, whimsy, historical layering and crowding are forms of aesthetic pleasure. People need different forms of interactional pleasure as public sociability, people watching and public

solitude, and each person seeks one of them in the public space according to his or her mood, state of mind or spirit.

Aesthetic has a different meaning for each individual. There are many public art elements in the case study area that can be called good, bad and without comment (Figure 5.85/86/87).

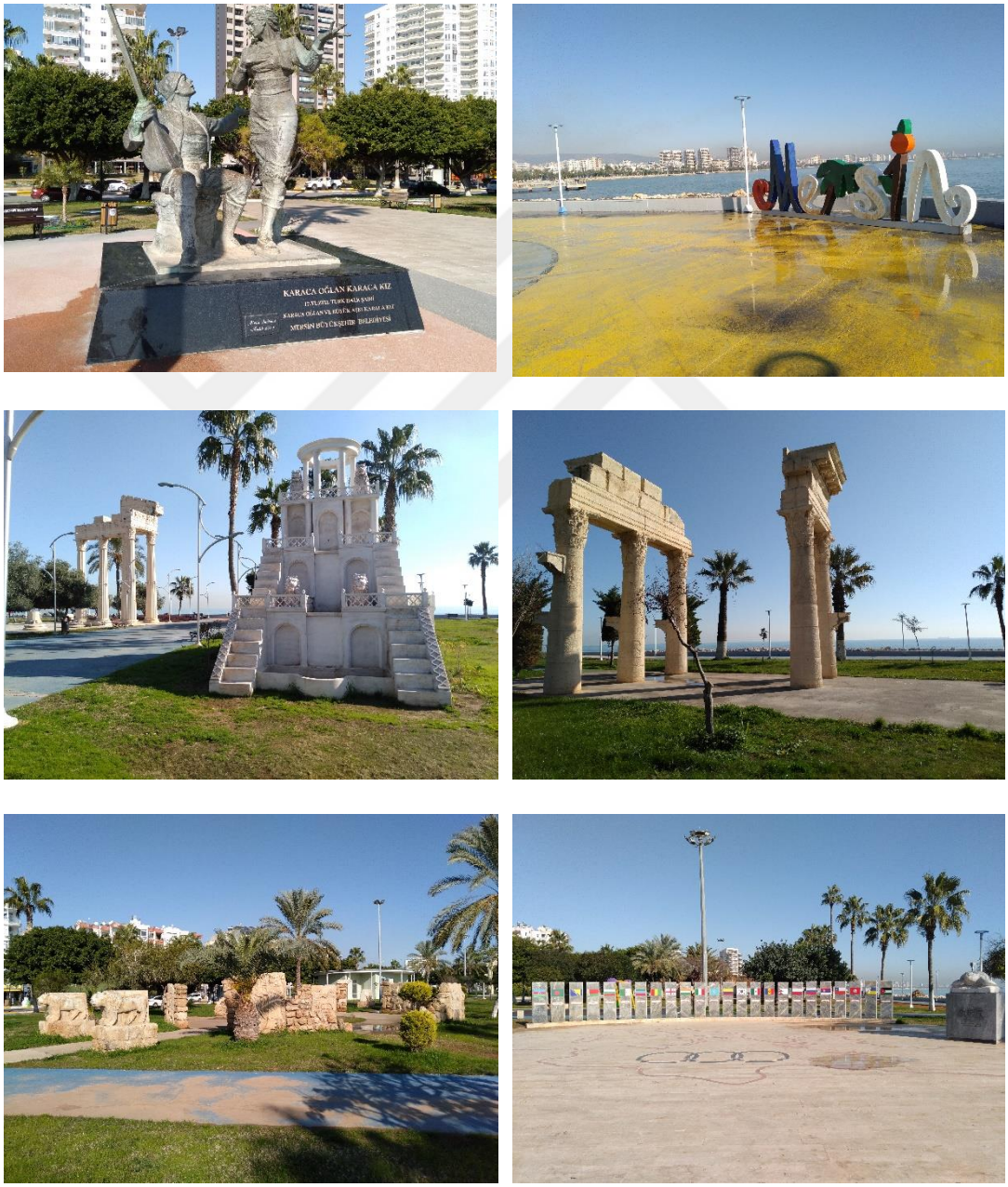


Figure 5.85. Examples of public art elements in Zone-1 (personal archive)

Figure 5.86. Examples of visual elements in Zone-2 (personal archive)

Figure 5.87. Examples of visual elements in Zone-3 (personal archive)

As you walk through the area, seeing them as a part of walking and perceiving it as a stop or a rest is actually part of the aesthetic need. While walking in the study area, the built environment-impact zone of the case study area as well as the sea is also very important in terms of the feeling and perception of the person. However, some public art elements limit efficient use of public space for varying activities. For example, some festivals and cultural activities are organized in the Coastal Park of Mersin, but useless public art elements, even called as squares, become an obstruction for pedestrian movement (Figure 5.88).

Figure 5.88. the structure called as Galatasaray Square limited efficient use of hard ground open spaces as gathering places (personal archive)

In any case, while Zone-1 and Zone-2 have high-rise buildings, leaving a negative image of the city, consisting solely of buildings. Zone-3, Pozcu and its surroundings with living commercial areas, human scale construction and mixed use, you can feel

a living city. Another aesthetic value and pleasure is based on human interaction. Beside sense of alone, people watching is also an aesthetic need for individual. Navigating the area like a *"flâneur"* is possible to enjoy the solitude and watch the crowds throughout the area.

Another aesthetic element is the sound of the waves and the smell of the sea in the entire area such that for all people, this pair is one of the reasons why Mersin Coastal Park is preferred and increases the aesthetic value of the case study area.

Other aesthetic values are trees and the wind you feel as you move between trees in the case study area. Almost all of Mersin, you cannot feel that you are in a city with a sea. Therefore, the study area is the only place where the most important aesthetic values such as trees, light wind wave sound and sea smell can be felt together.

5.2.2.4 Comfort of Mersin Coastal Park

The existence and appropriate location of street furniture, and lighting, the existence of services and amenities, convenience and maintenance of walking path and bicycle path are physical components of comfort. Also, shelters, trees, climatic or natural factors are environmental aspects of comfort. Therefore, for the assessment of comfort in terms of outer factors of pedestrian behaviour, physical and environmental variables mentioned above were evaluated in the case study area.

For the evaluation of street furniture in the case study area two related questions were asked to users. As mentioned in "public recreational facilities and services and amenities" parts of inner factors for Mobility, according to 2018 Survey, regarding the question of "whether there are sufficient benches and resting places along Coastal Park ", approximately half of respondents claimed that these street furniture equipment were sufficient in Zone 1 and in Zone 2. In Summer 2019, 60% of respondents evaluate this statement as sufficient between Mezitli River and Marina (in Zone 1 and Zone 2). On the other hand, In Zone-3, the majority of respondents partially agree the adequacy of the number of benches and resting places. In sum, Zone-1 and Zone-2 are obviously better than Zone-3.

Regarding the appropriate location of street furniture, the relevant question is "*whether the locations of benches and pergolas in the Coastal Park are well chosen*". In Fall 2018, approximately 40% of respondents in Zone-1 and Zone-2 are agree and approximately 40% of users are partially agree this statement. In summer 2019, the half of all respondents agree and approximately one-third of users partially agree the statement that the placement of benches and pergolas are well chosen. Briefly put, although a slight difference, Zone 2 is better than Zone 1, in Fall 2018, and Zone 1 better than Zone 2, and these two zones are obviously better than Zone 3 in Summer 2019.

The other question is related with services and amenities that *"whether there are enough pedestrian amenities and facilities (Public toilets-water)"*. The most of users (approximately 75% of respondents in Fall 2018 and 60% of respondents in Summer 2019) claimed that there are insufficient pedestrian amenities and facilities in the case study area. However, analysed in detail, according to responses of users, Zone-1 and Zone-2 are better than Zone-3 in terms of sufficiency of pedestrian amenities and services.

Gehl (2010: 180) claims that the lighting in city space has a great impact on orientation, security and visual quality in the dark hours. A well-lit space provides pedestrian's comfort, safety and encourages walking. Regarding lighting at night, one related question was asked to the respondents that "*whether night lighting is sufficient in the case study area*". In Fall 2018, approximately 47% of respondents agree and 28% of respondents partially agree this statement in both Zone 1 and Zone 2. In Summer 2019, approximately 68% of respondents agree the statement that Mersin Coastal Park is a well-lit space at night, in the entire case study area. More specifically, according to survey results, Zone 2 is better than Zone 1, and Zone 1 is better than Zone 3.

The last question related to comfort variable of outer factor of mobility is "whether the Coastal Park is sufficiently shaded". In Fall 2018 questionnaire (Figure 5.89), approximately one-third respondents agree sufficiency of shaded areas in Mersin

Coastal Park. Similar results in Summer 2019 survey (Figure 5.90) indicate that users' expectations for shaded areas are satisfied by the case study area.

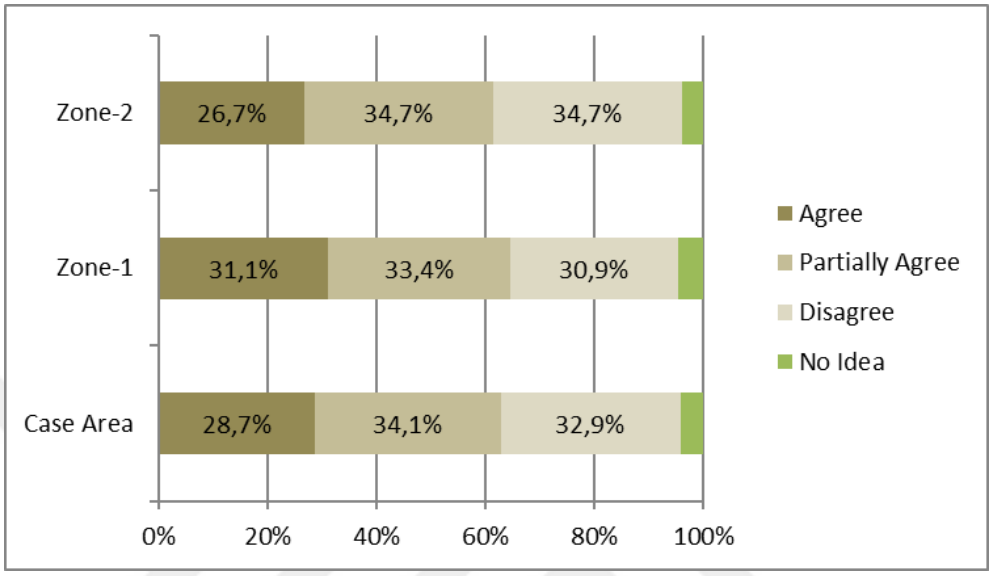


Figure 5.89. The outcome of Question 31 "whether the Coastal Park is sufficiently shaded" in Fall 2018

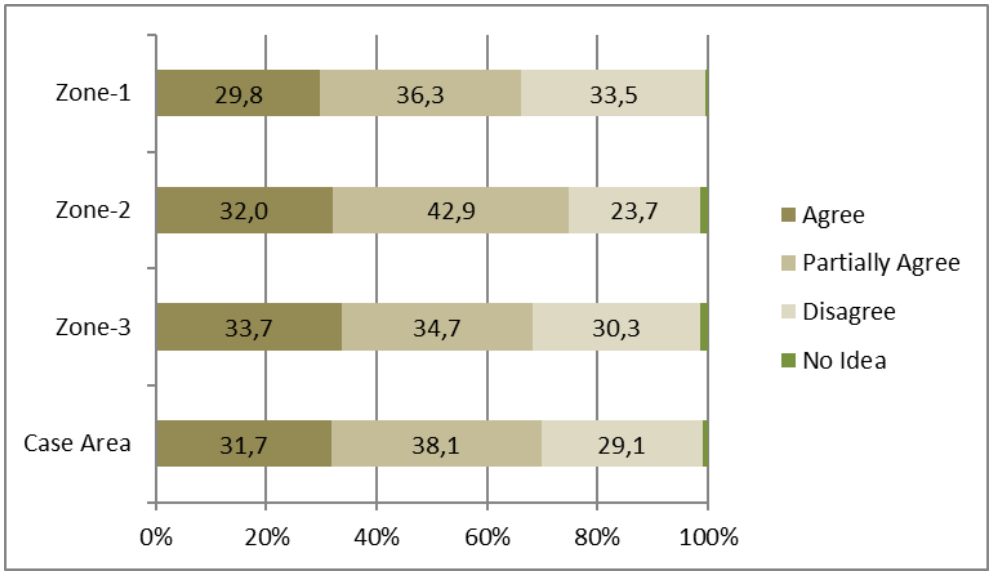


Figure 5.90. The outcome of Question 31 "whether the Coastal Park is sufficiently shaded" in Summer 2019

In sum, the existence and appropriate location of street furniture, and lighting, the existence of services and amenities, convenience and maintenance of walking path and bicycle path shall be examined as physical components of comfort. In addition to them, shelters, trees, climatic or natural factors are environmental aspects of comfort. These varying factors emphasize opportunities for walking, standing, sitting, seeing, talking and listening and playing or exercising.

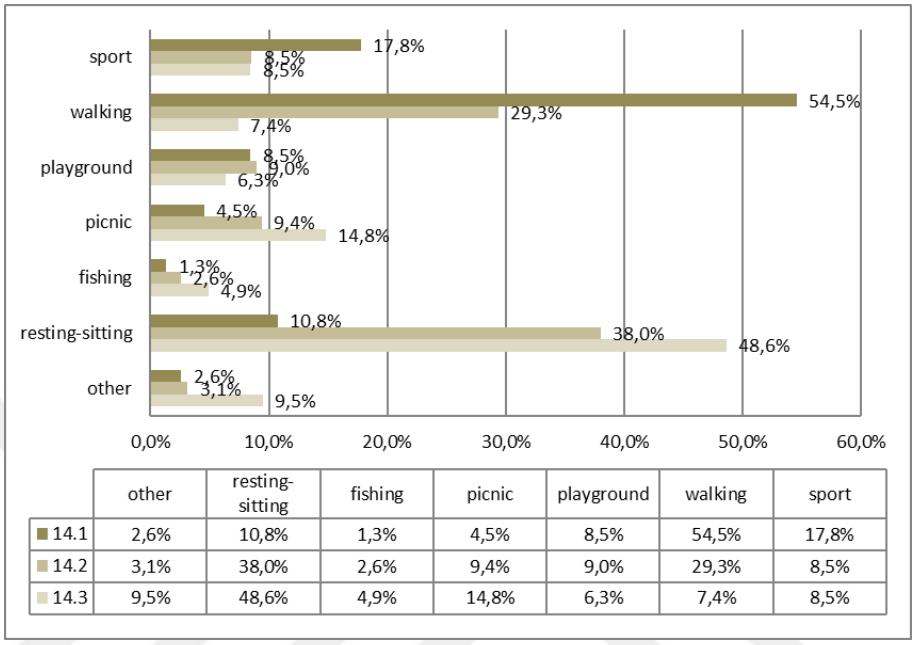
In defined context, according to aforementioned evaluations for street furniture, lighting, the existence of services and amenities, convenience and maintenance of walking path and bicycle path, Zone-1 has better comfort facilities than Zone2 and, Zone-2 is better than Zone-3.

5.2.2.5 Attractiveness of Mersin Coastal Park

The "attractiveness" is one of the key indicator of pedestrian behaviour in making public space. The variables of attractiveness are convenience of street network, pedestrian amenities and facilities, walking paths, planting, lightening, interesting urban landscape and especially diversity of activities and events.

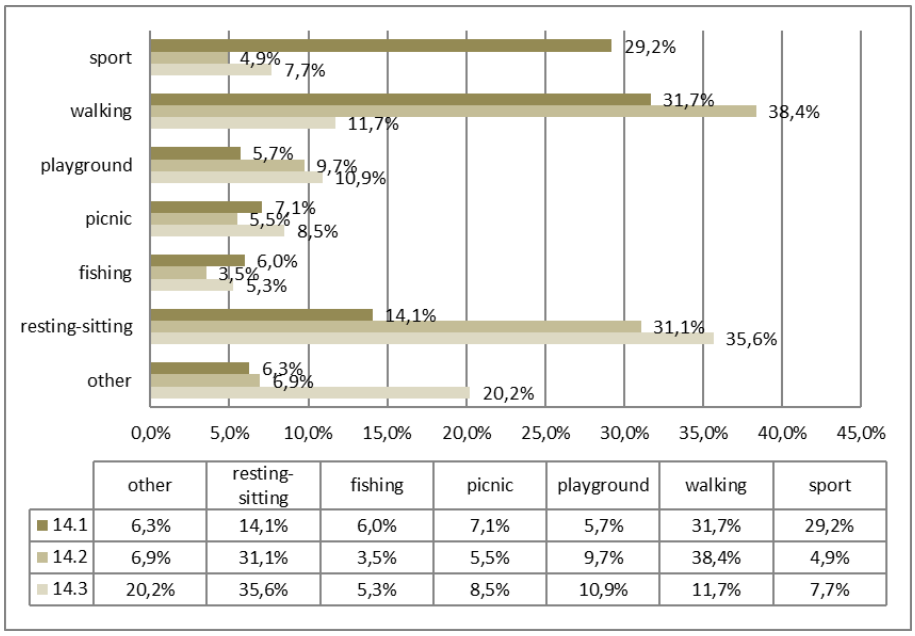
Within this scope, four related questions were asked to the users. In Fall 2018, regarding the question of "for what purpose you usually use the Mersin Coastal Park", the great majority of respondents maintain that firstly they use the case study area for walking (54.5%), and secondly they use this area for resting and sitting (48.6%). It is followed by playing sport (17,8%)and having a picnic (14.8%) (Figure 5.91). According to Summer 2019 survey, approximately 40% of users claimed that firstly they use the case study area for walking and secondly they use this area for resting and sitting (35.6%). It is followed by sport activities (Figure 5.92). Crosstabulations (Appendix-C) based on gender and age indicate that young males (16-34 years old) use the Coastal Park for resting and sitting, while older ones 35-59 years old use sports and walking, 60+ groups just for sport activities. On the other hand, young female

group prefer to use the Coastal Park for resting, sitting and sports, while older ones for walking, and 60+ groups just for walking.



	other	resting-sitting	fishing	picnic	playground	walking	sport
14.1	2,6%	10,8%	1,3%	4,5%	8,5%	54,5%	17,8%
14.2	3,1%	38,0%	2,6%	9,4%	9,0%	29,3%	8,5%
14.3	9,5%	48,6%	4,9%	14,8%	6,3%	7,4%	8,5%

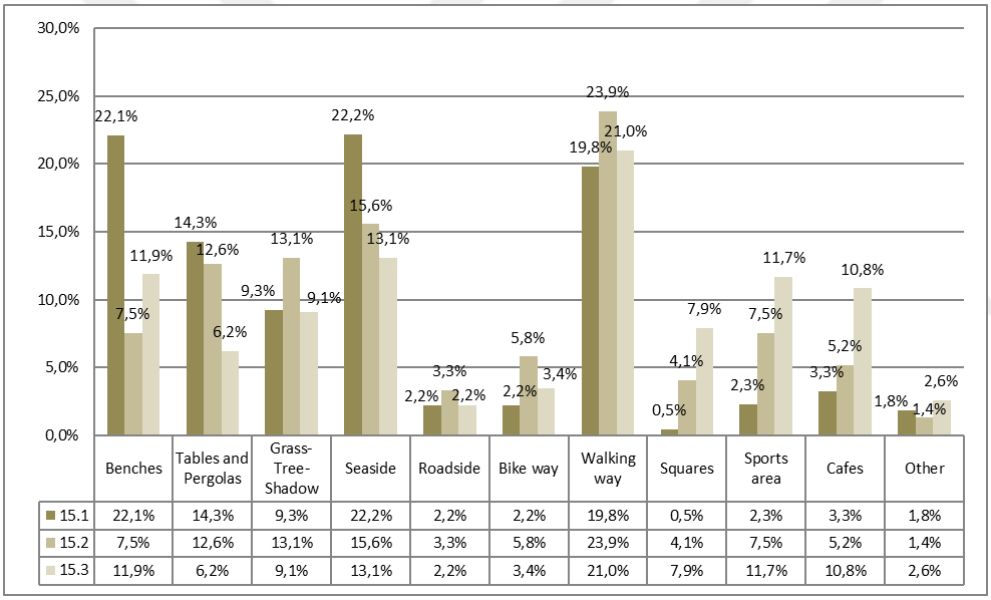
Figure 5.91: The outcome of Question 14 "for what purpose you usually use the Mersin Coastal Park" in Fall 2018



	other	resting-sitting	fishing	picnic	playground	walking	sport
14.1	6,3%	14,1%	6,0%	7,1%	5,7%	31,7%	29,2%
14.2	6,9%	31,1%	3,5%	5,5%	9,7%	38,4%	4,9%
14.3	20,2%	35,6%	5,3%	8,5%	10,9%	11,7%	7,7%

Figure 5.92: The outcome of Question 14 "for what purpose you usually use the Mersin Coastal Park" in Summer 2019

The second questionnaire statement, preferred place of the case study area were asked to the respondents by an open-ended question, "where are the areas you prefer to use in the Coastal Park?". According to the results of questionnaire in Fall 2018, Coastal Park, benches and walking path are the most preferred areas (Figure 5.93). Besides, in Summer 2019 (Figure 5.94), more respectively, sports area, walking path and the Coastal Park are preferred areas. Considering these responses, according to the seasons, differences emerge in the usage areas. While the first choice in summer is the use of the Coastal Park instead of walking, the first choice emerges as the use of walking paths in the Fall.



	Benches	Tables and Pergolas	Grass-Tree-Shadow	Seaside	Roadside	Bike way	Walking way	Squares	Sports area	Cafes	Other
15.1	22,1%	14,3%	9,3%	22,2%	2,2%	2,2%	19,8%	0,5%	2,3%	3,3%	1,8%
15.2	7,5%	12,6%	13,1%	15,6%	3,3%	5,8%	23,9%	4,1%	7,5%	5,2%	1,4%
15.3	11,9%	6,2%	9,1%	13,1%	2,2%	3,4%	21,0%	7,9%	11,7%	10,8%	2,6%

Figure 5.93: The outcome of Question "where are the areas you prefer to use in the Coastal Park ?" in Fall 2018

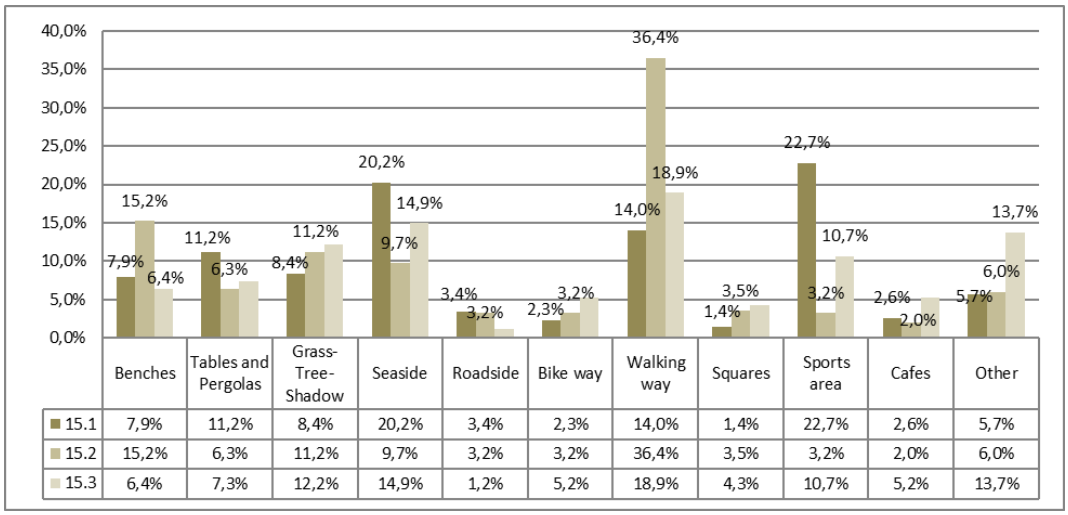


Figure 5.94: The outcome of Question "where are the areas you prefer to use in the Coastal Park ?" in Summer 2019

According to crosstabulation of Question "where are the areas you prefer to use in the Coastal Park" with age and gender underlines that younger groups prefer to use side for sea, but others for sport areas and walking paths.

The other question is asked to users to evaluate their preferences about sufficiency of open green areas of their neighbourhood. In Fall 2018, according to answer of open ended question "I prefer to use the Coastal Park because the open green areas and public spaces in my neighbourhood are insufficient", approximately the half of the users (46.2%) agree the insufficiency of green spaces of their neighbourhood, and so they prefer to use the Coastal Park as public space and green space (Figure 5.95). However, according to Summer 2019 questionnaire, great majority of respondents (74,1%) claim that they use the Coastal Park because of the insufficiency of green and public spaces in their neighbourhood (Figure 5.96).

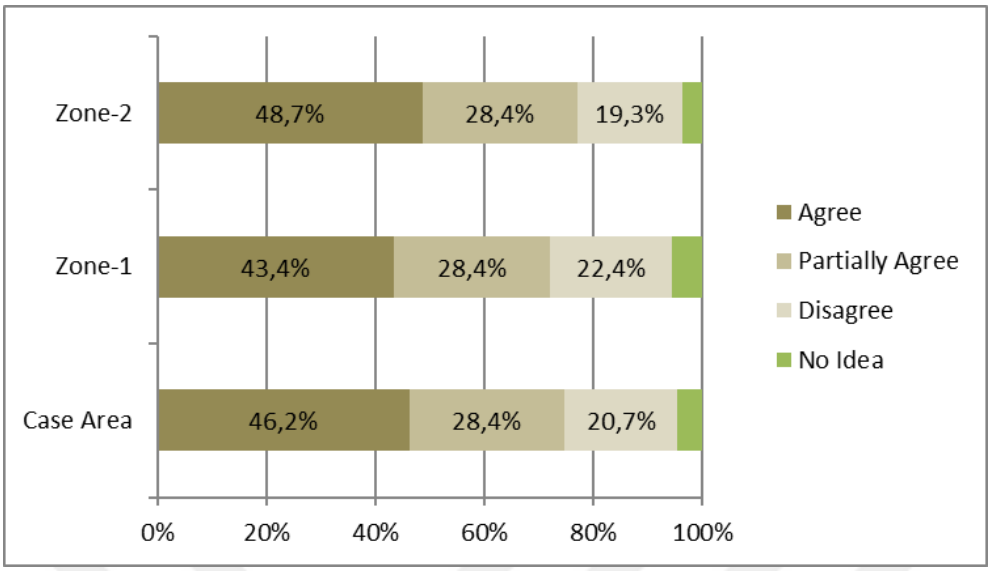


Figure 5.95: The outcome of Question "" I prefer to use the Coastal Park because the open green areas and public spaces in my neighbourhood are insufficient"" in Fall 2018

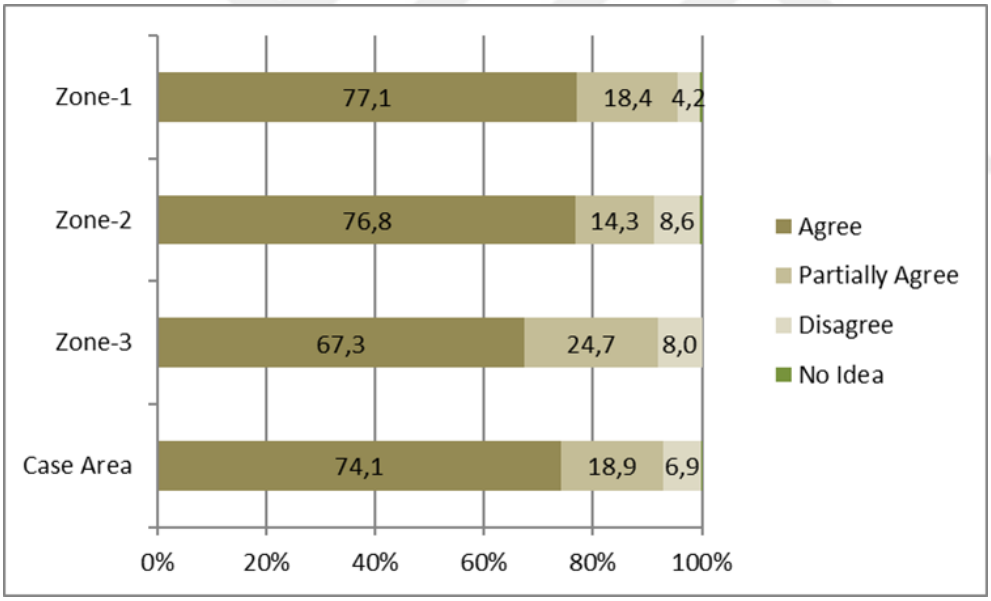


Figure 5.96: The outcome of Question "" I prefer to use the Coastal Park because the open green areas and public spaces in my neighbourhood are insufficient"" in Summer 2019

5.2.2.6 General Assessment of Outer Factors of Pedestrian Behaviour

As a result of aforementioned results and discussions, Zone-1 is definitely better than other zones, especially in terms of physical safety, connectivity, comfort and attractiveness. On the other hand, the case study area is definitely the largest open green spaces in Mersin Metropolitan Area with varying facilities and of course well-being of Coastal Park. Therefore, it would be accepted as a whole recreational space in terms of outer factors determining and sometimes motivating pedestrian behaviour (Table 5.7 and Figure 5.97).

Table 5.7. Summary table for outer factors of pedestrian behaviour

			Zone-1	Zone-2	Zone-3
PEDESTRIAN BEHAVIOUR	**Outer**	*Physical Safety*	*	+	-
		Connectivity	*	-	+
		Aesthetic Quality	+	+	*
		Comfort	*	+	-
		Attractiveness	*	*	+

** Good*

+ Fairly good

- Poor

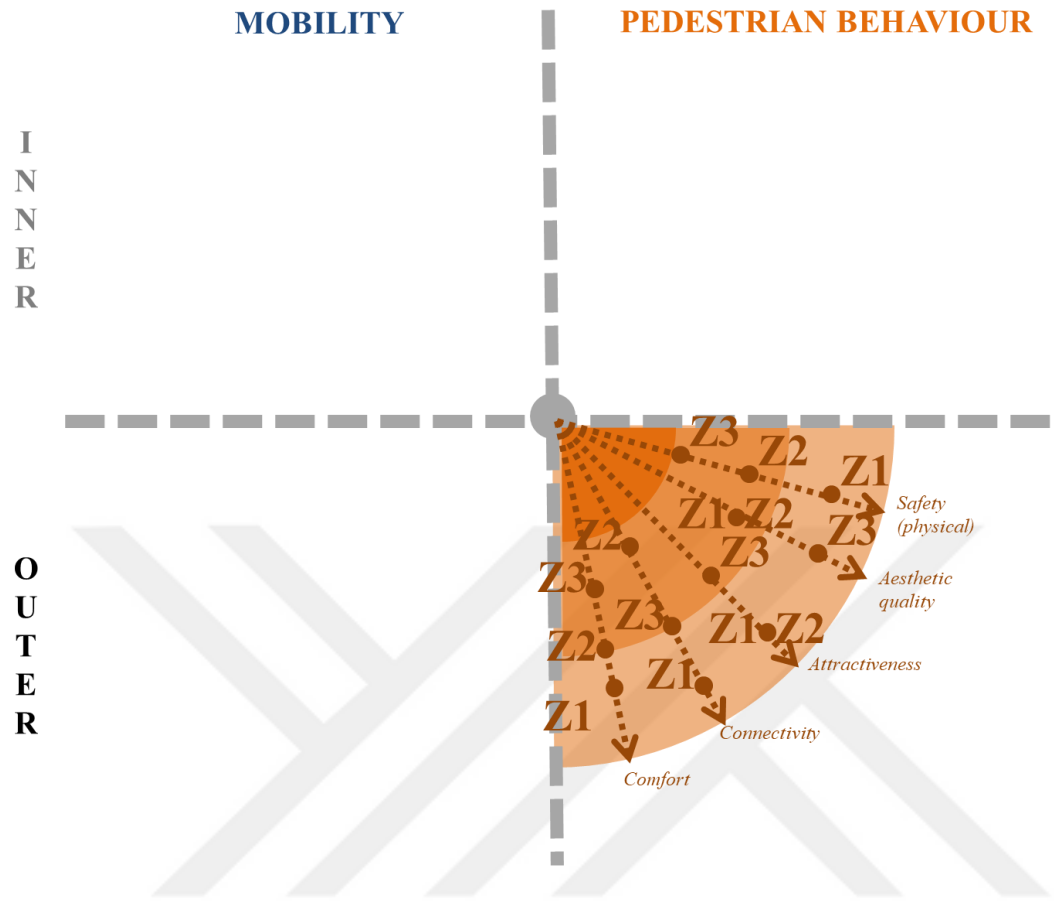


Figure 5.97. Inner indicators of pedestrian behaviour in making public space

5.3 The Evaluation of Mersin Coastal Park as a Public Space

As emphasized in the previous chapters, it is not possible to limit the definition of the public space solely on property rights. As a fact that an area has a public function, such as a school or square, does not mean that it is an effective and efficient public space. In any case, planning and urban design have a mandatory role in the formation of the public space. However, the intervention tools of planning and urban design are limited to controllable variables. In this context, the set of methods and variables within the scope of this thesis describes a process that can be used to evaluate the role of pedestrian behaviour and mobility in the formation of public space (Figure 5.98).

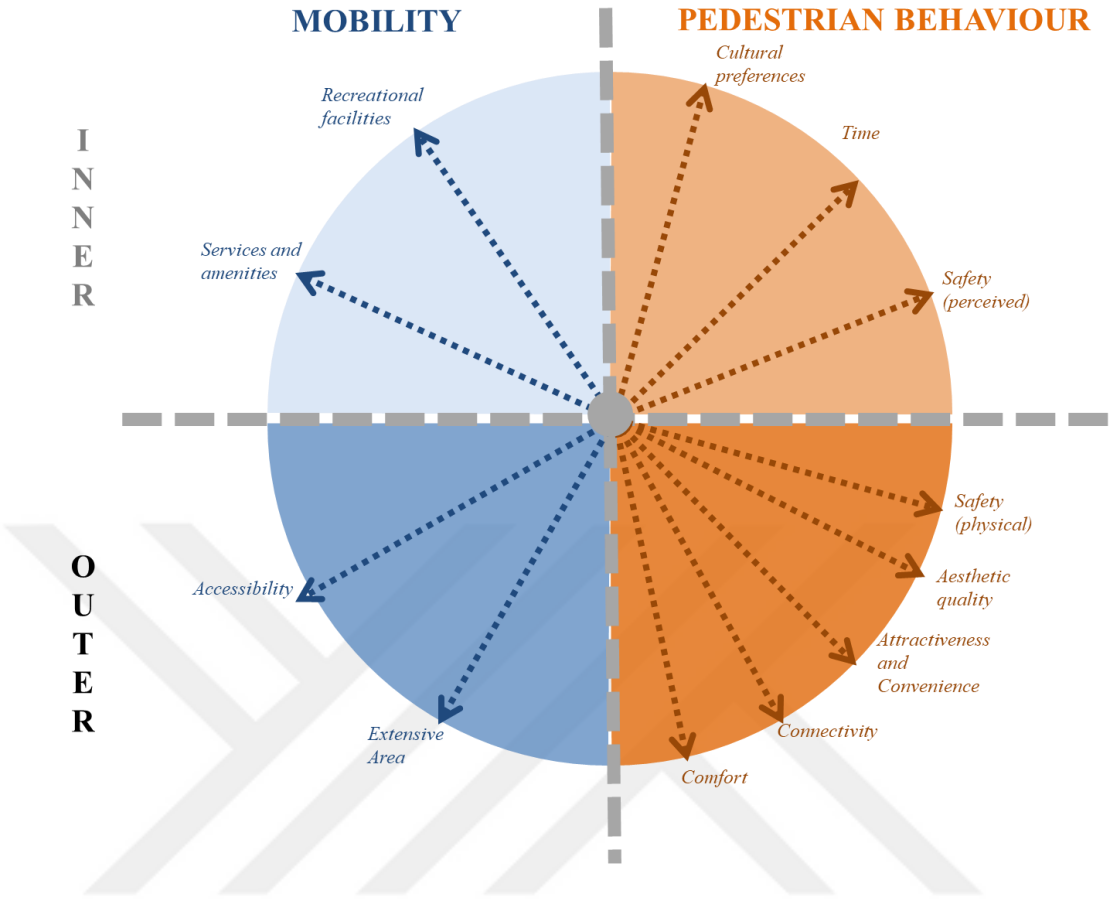


Figure 5.98. The Method Chart including aspects of mobility and pedestrian behaviour

In this context, when we evaluate inner and outer factors affecting mobility and pedestrian behaviours one by one and when we compare the sub-zones in term of factors, there are different results for each factor (Figure 5.99). A comparative assessment, which can be considered as good, fairly good and bad, also indicates that Zone-1 has more potential and possibility for making of public space than others. Similarly, Zone-2 also allows for the creation of public focal points with the opportunities provided by the Marine and the natural beach. Zone-3, on the other hand, is narrower in cross-section than the other sub-zones and encourages a linear movement, but can create public spaces based on its relationship with Pozcu Neighbourhood (Figure 5.100 and Table 5.8).

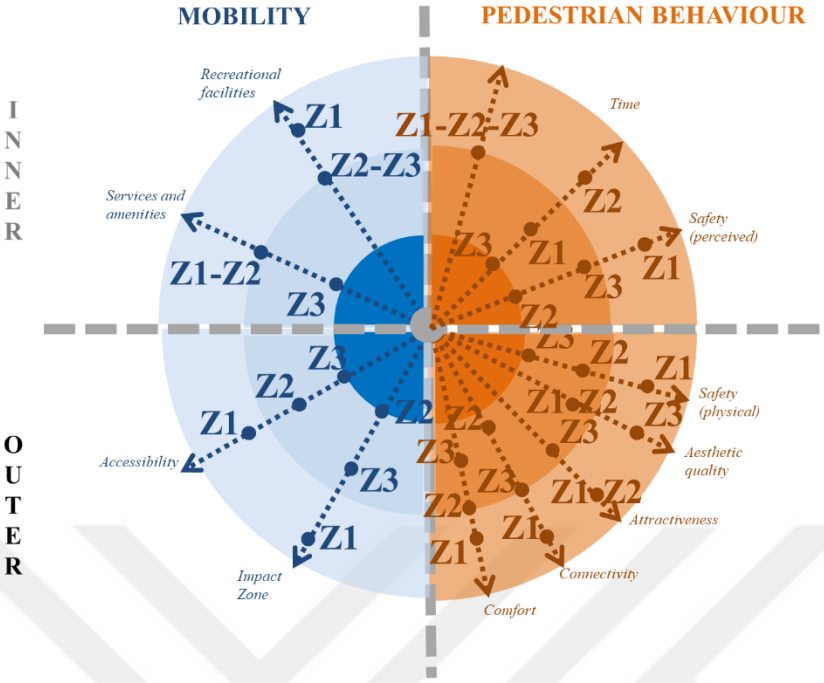


Figure 5.99. Overlay of each aspects according to Zones

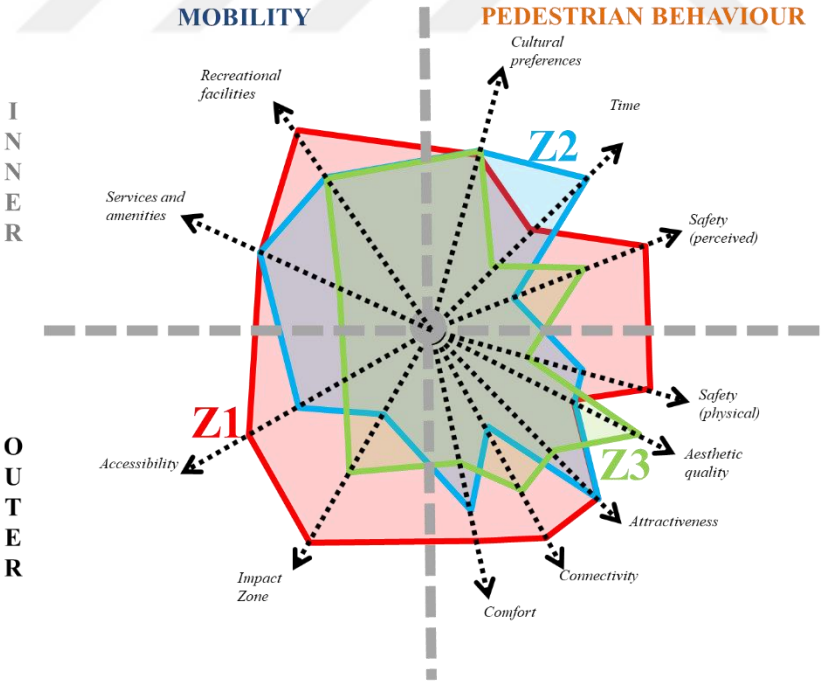


Figure 5.100. Chart to understand the characteristics of public space

Table 5.8. Summary table for comparing Zone-1, Zone-2 and Zone-3

			Zone-1	Zone-2	Zone-3
MOBILITY	**Inner**	*Public Recreational Facilities*	*	+	+
		Services and Amenities	+	+	-
MOBILITY	**Outer**	*Impact zone*	*	-	+
		Accessibility	*	+	-
PEDESTRIAN BEHAVIOUR	**Inner**	*Perceived Safety*	*	-	+
		Cultural Preferences	+	+	+
		Time Factor	+	*	-
PEDESTRIAN BEHAVIOUR	**Outer**	*Physical Safety*	*	+	-
		Connectivity	*	-	+
		Aesthetic Quality	+	+	*
		Comfort	+	+	+
		Attractiveness	*	*	+

***** *Good /* **+** *Fairly good /* **-** *Poor*

As a result, the most important tool for assessing the quality or effective use of public space is user counts. In addition to the number of users, the frequency, period and reason of use describe different patterns of use and user within the public space. In the conclusion, sub-character zones within the Mersin Coastal Park, which are evaluated through the sub-zones as Zone-1, Zone-2 and Zone-3, will be defined by evaluating these patterns. These sub-character zones are going to provide significant implications for the sense of place, adapting a place in as a public space.

CHAPTER 6

MAKING PUBLIC SPACE IN MERSİN COASTAL PARK

The chapter includes the evaluation of results and findings of research for making public space in Mersin Coastal Park. Making public space is examined as a process bases on user counts and their main activities. Two sets of comparison; first one is the comparison of sub-zones and the second one is the comparison of similar functions based on user counts let us to understand the characteristics of zones in making public space.

6.1 Comparison of Sub-Zones According to User Counting

User counts are essential determinants of making public space in accordance with the density of use (Whyte, 1980: 73). The counts will indicate the characteristics of public space by means of quantitative terms like number of user, type of users (pedestrian counts). Therefore, changes in hours of day, in a week and in a year (seasonal changes) are significant to evaluate public space. In the study, because of limitations in time and personnel, changes in a year or seasonal changes could not be evaluated by user counts. However, changes in a day and weekdays or weekends are investigated in detail. User counts include main activities of users sports, dining or waterfront activities like fishing. v total number of users are the same for Zone-1 and Zone-2, Zone-3 is a little bit denser than others (Figure 6.1 and 6.2).

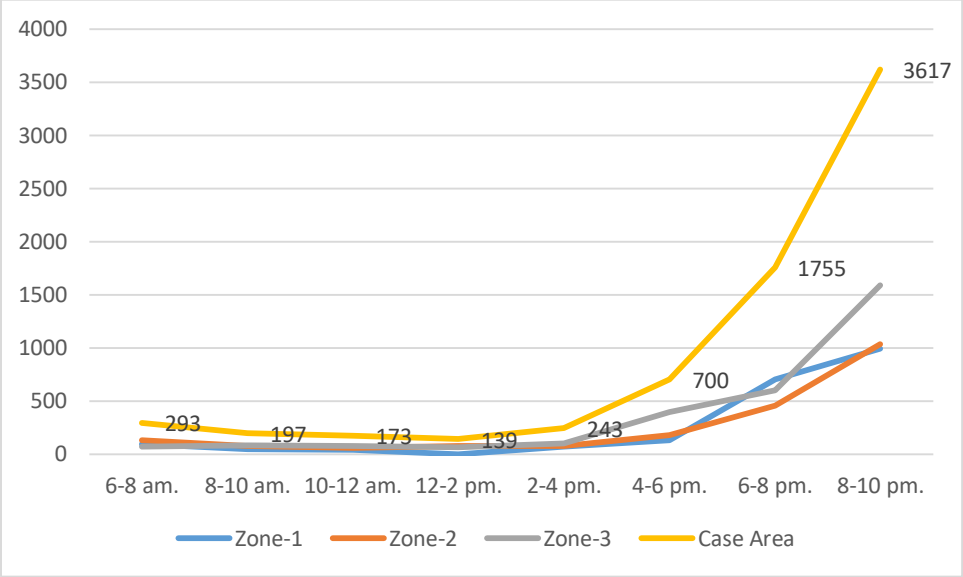


Figure 6.1. Number of user counts for each zone / Weekdays

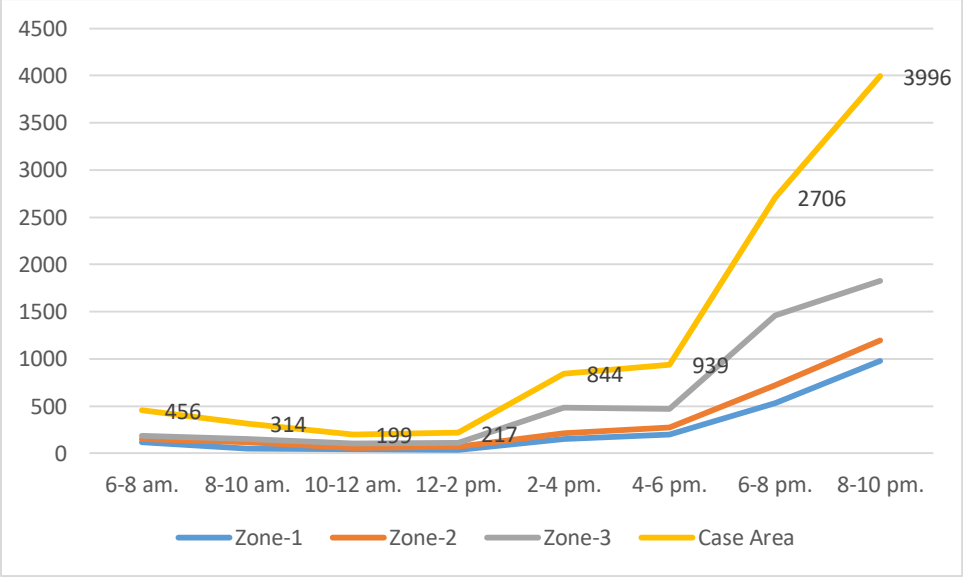


Figure 6.2. Number of user counts for each zone / Weekends

On the other hand, when spatial distributions of users and their main activities are examined the characteristics of zones would be easily understood. Figure 6.3 and Figure 6.4 represent the total number of user in a day and the size of circles are gradually determined according to numbers in a specific location. Light blue circles indicate recreation and sporting activities and pink circles indicate sea-side uses like fishing or swimming.

In defined context, Zone-1 is seen as continuously and densely used area with varying functions. In Zone-1, as discussed in Chapter-5 there are alternatives o sporting facilities, recreational spaces and open spaces. Especially, residential areas in its impact zone cause overall and almost homogeneous use of Zone-1. In weekends, overall using pattern and users' rhythm continue with fishing activities.

On the other hand, although there are similar sporting and recreational facilities, some foci are densely used in Zone-2 and Zone-3. In Zone-2, there are some administrative use or idle spaces in impact zone, so the number of users are lower than other areas. In any case, natural coast / beach located in the eastern side of Marine, is the most crowded and vital area. Not only Coastal Park activities, but also recreational activities in that area are frequently and continuously used by varying age and interest groups.

Zone-3 has a similar impact zone with Zone-1. Residential neighbourhood and sub-centre activities in Pozcu District and Kushimoto Street have potential to create activity centres in case study area. However, Zone-3 is prominently narrower than Zone-1 and Zone-2. Therefore, only some facilities like skateboard area and alternative gathering areas would be seen foci for Zone-3.

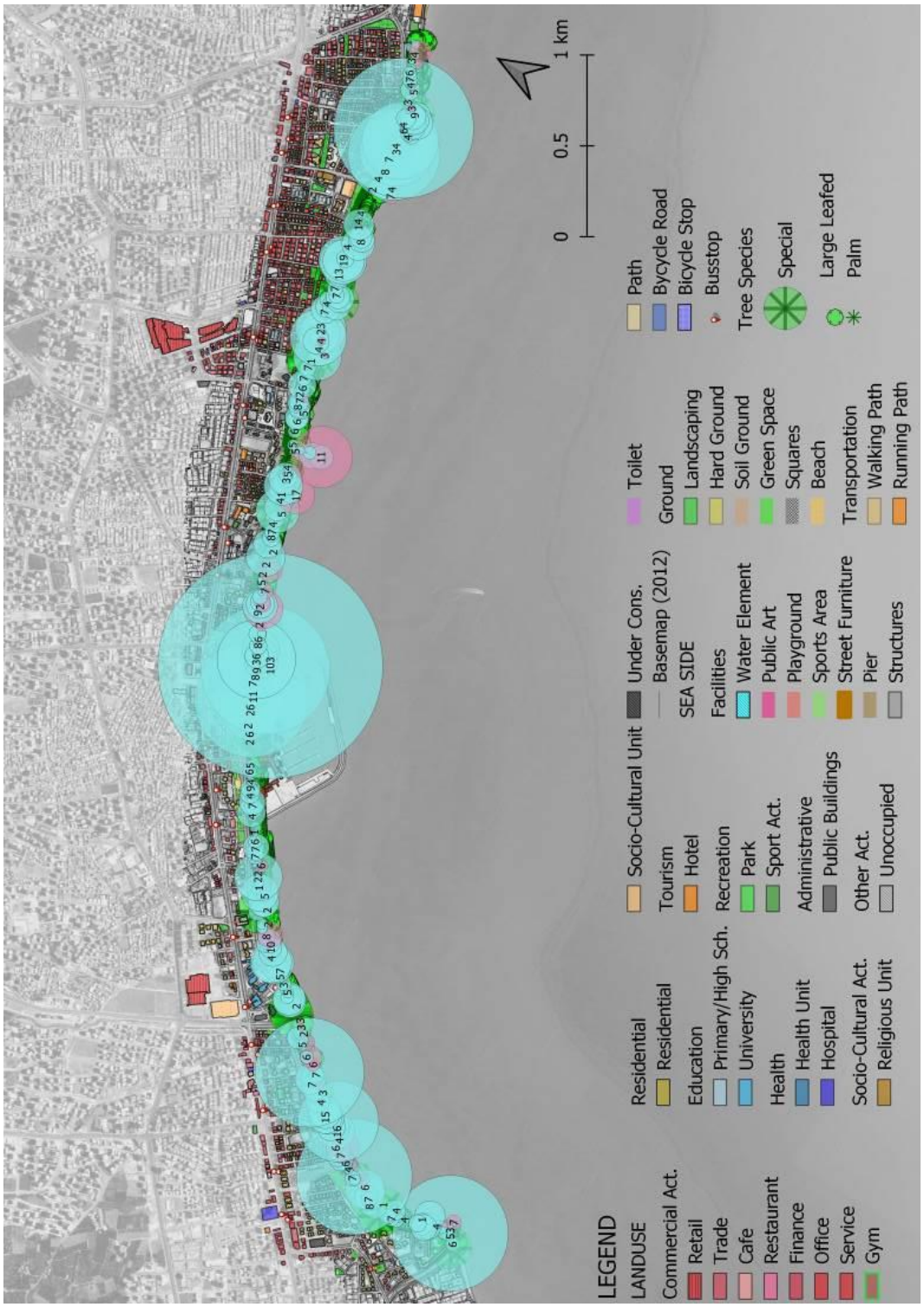


Figure 6.3. The spatial distribution of users in Weekdays

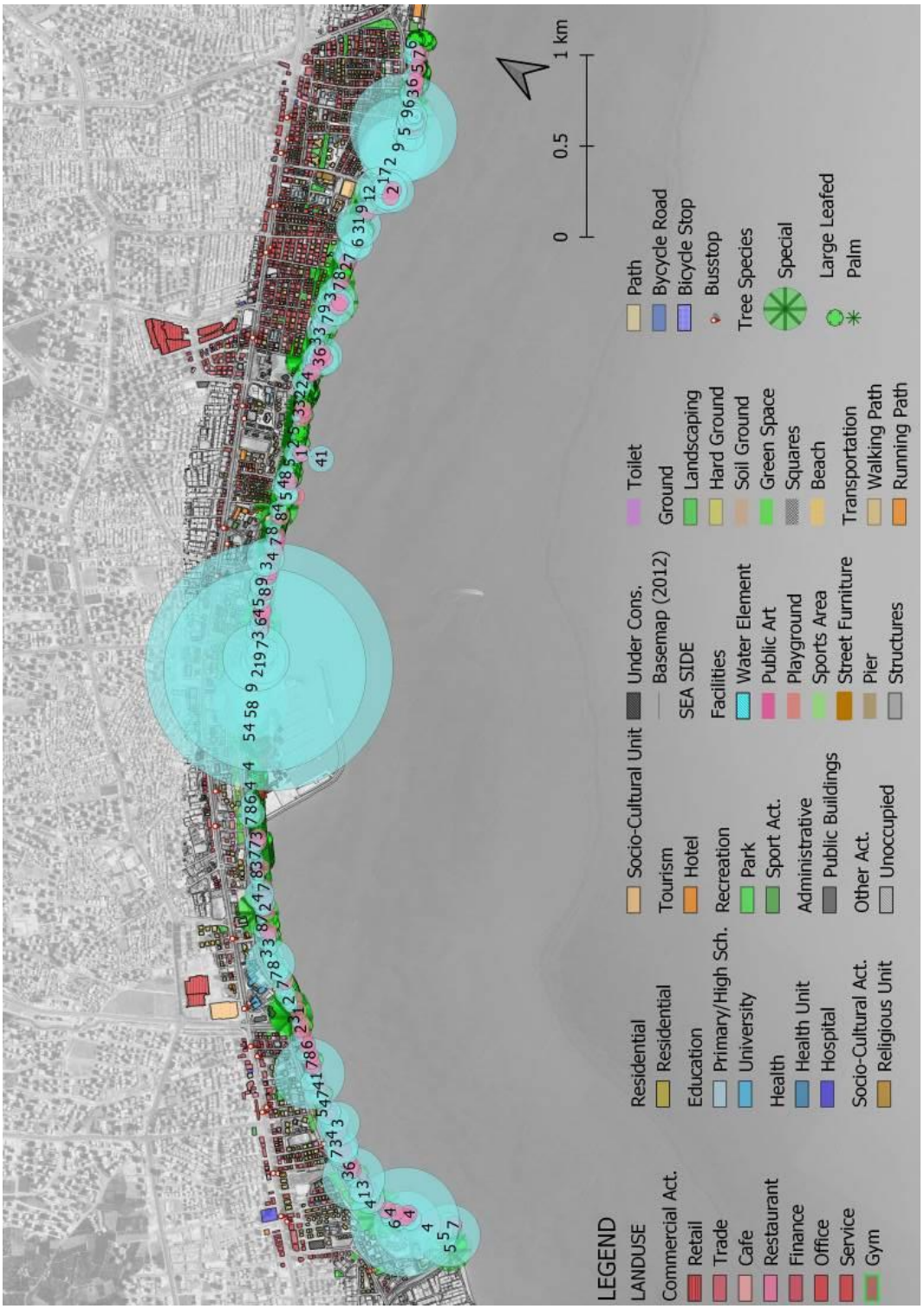


Figure 6.4. The spatial distribution of users in Weekends

As Gehl (2010) emphasizes, the quality of the public space has significant impacts, particularly for optional and social activities. In this context, when we evaluate the case study area, it is not possible to talk about necessary daily activities such as home to work and home to school. Only a very small group of bicycles and electric bicycles are used for this purpose. As an optional activity, recreation activities are main activities in the study area. However, public spaces, activities and social activities are integrated to allow for social activities. As a fundamental result of the study, single uses are insufficient in making public space. The variety of uses and possibilities allow some character areas to be perceived and adopted as public spaces. The adoption and use of such areas emphasized the factors in making public spaces. These sub-zones let to organize festival and social activities.

In the western side of Zone-1, open green space, sports facilities and decks create a sense of place for this area. Viranşehir neighbourhood with coffee houses, mixed use and of course residential areas emphasize that area, which is also physically safe and with low noise, become attractive for young peoples. At the eastern side of that area, direct relation with the sea would create a sense of place with benches and pergolas. In Zone-2, as emphasized by user counts, the natural beach attracts different user groups in different ages, and social profile let to develop varying set of activities with sport facilities, amenities, benches and so on. This agglomeration is unique for whole case study area. In Zone-3, as mentioned earlier, the intense relationship with Pozcu District and Kushimoto Street, in particular, constitutes a sub-character zone on the coastline. This area is especially integrated with the gastronomic facilities located in the coastal line of Pozcu District. Other sub-character areas in Zone-3 are the vista areas formed by the sea with public art elements like war plane and warship symbolizing the Cyprus Peace Operation. These areas are mainly used for intensive photo shooting.

As a result, when we make an evaluation, the most important share in the user profile is the users walking by the sea. We can consider this user group as "*flâneur"* because they interact with other activities, so users integrate those activities into the rhythm of daily life (Figure 6.5). Walking become a part of life style. When we examine the user groups other than the walkers, it will be possible to evaluate the case study area as fishing (Figure 6.6), sitting (Figure 6.7) and / or families using the playground in different periods and times or different user with their expectations (Figure 6.8). In addition to these user groups, another group of users that increases the public character of the domain is informal sector (Figure 6.9). In the next section, an evaluation of the differentiating and similar patterns will be made through these user groups and activities.

Figure 6.5. Walkers, different age groups, social profiles, …

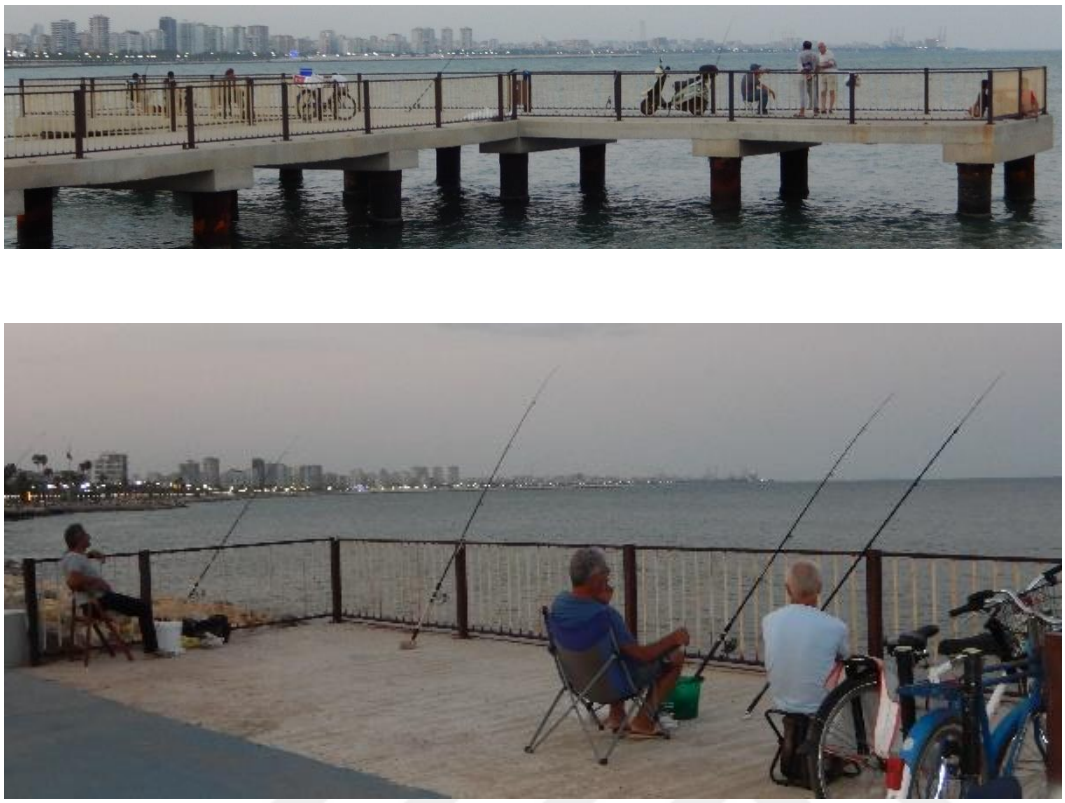


Figure 6.6. Fishers

Figure 6.7. Sitting peoples within different age groups and social profiles

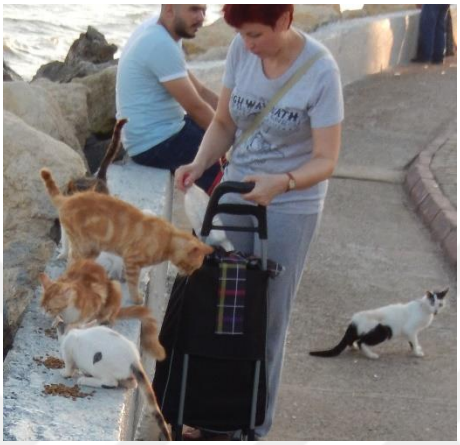


Figure 6.8. Skate board, festival, feeding animals or exercise collecting varying users

Figure 6.9 Informal sector users

6.2 Comparison of Similar Functions in Different Zones

In addition to the comparison of sub-zones according to general characteristics, comparison of similar facilities at the same time and the evaluation of periodical or spatial context according to user counts would determine specific results. Sports facilities, relation with sea on beaches, piers or platforms, playgrounds or recreational facilities like pergolas or benches have different daily routines and rhythms. In defined context, those functions and facilities are going to be evaluated for understanding findings.

6.2.1 Sport Facilities

Considering the case study area as a whole, there are sports areas within the sub-regions where single and / or several sports facilities are combined. When we examine these areas, it is seen that the number of users increased especially in the evening hours due to the fact that the user counts were made in August and September 2019. However, when an evaluation is made on the zones, it is seen that the area in the East of Mersin University Yenişehir Campus is not used sufficiently despite the intensive use of the area in Zone-1. The greatest difference in the number of users and profile between these two areas is due to the difference between the impact zones of both areas. The residential areas around Zone-1 and the relationship with the Viranşehir neighbourhood in particular provide the population that causes intensive use of sports fields.

In Zone-2, the empty area in the northern part reduces the number of users. In addition, due to the fact that the residential areas in the north of Zone-2 are in the form of gated communities, the participation of the coastal areas is low. Similarly, the sports grounds at the eastern border of Zone-2 and integrated with the natural coastline to the east of the Marina are not sufficiently utilized given the dense population in the area. Considering the nature of the axis along the coastline as a walk and pedestrian path, it is seen that it is a homogeneous use independent of other uses.

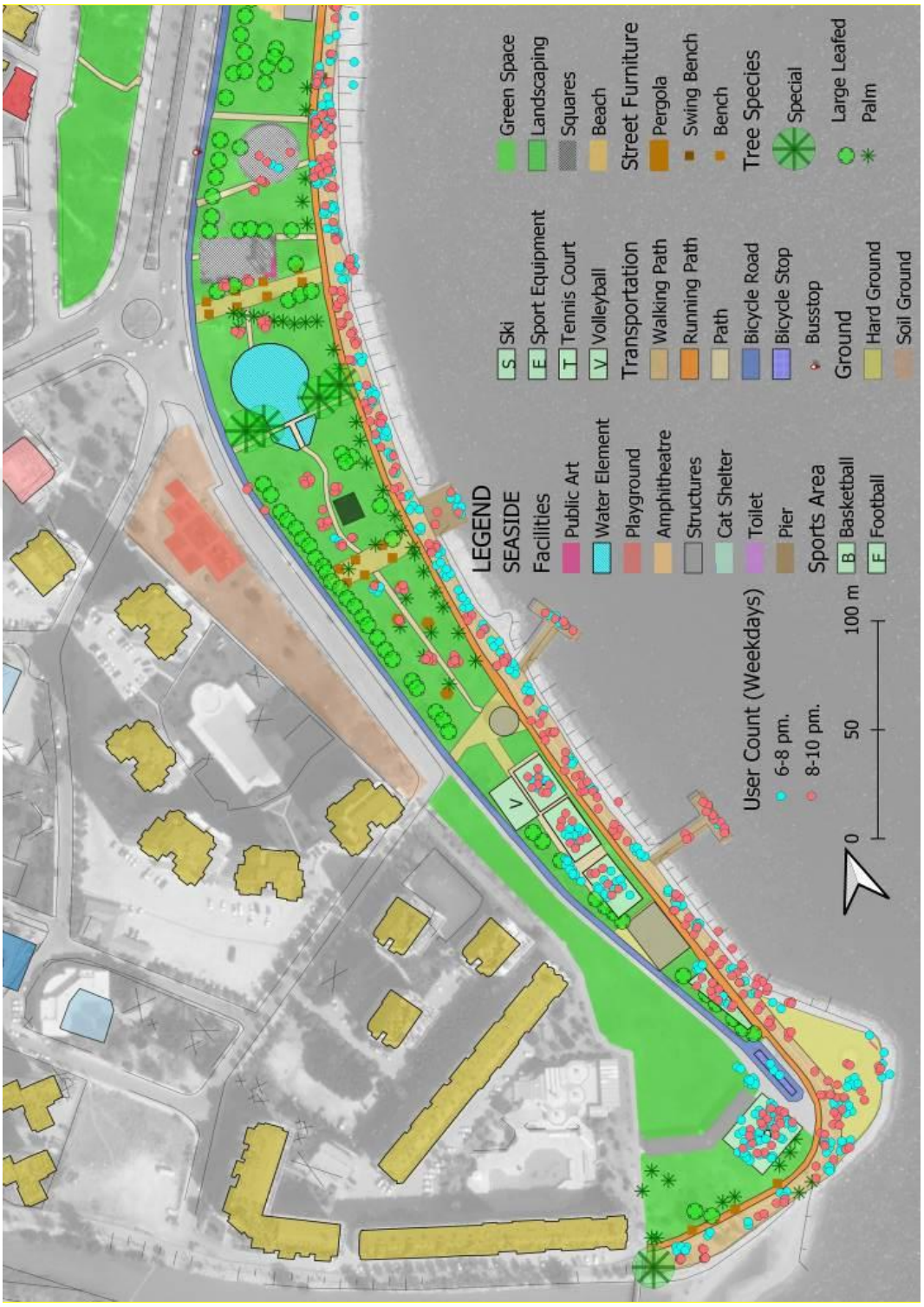


Figure 6.10. The spatial distribution of users in Weekdays for the western side of Zone-1.

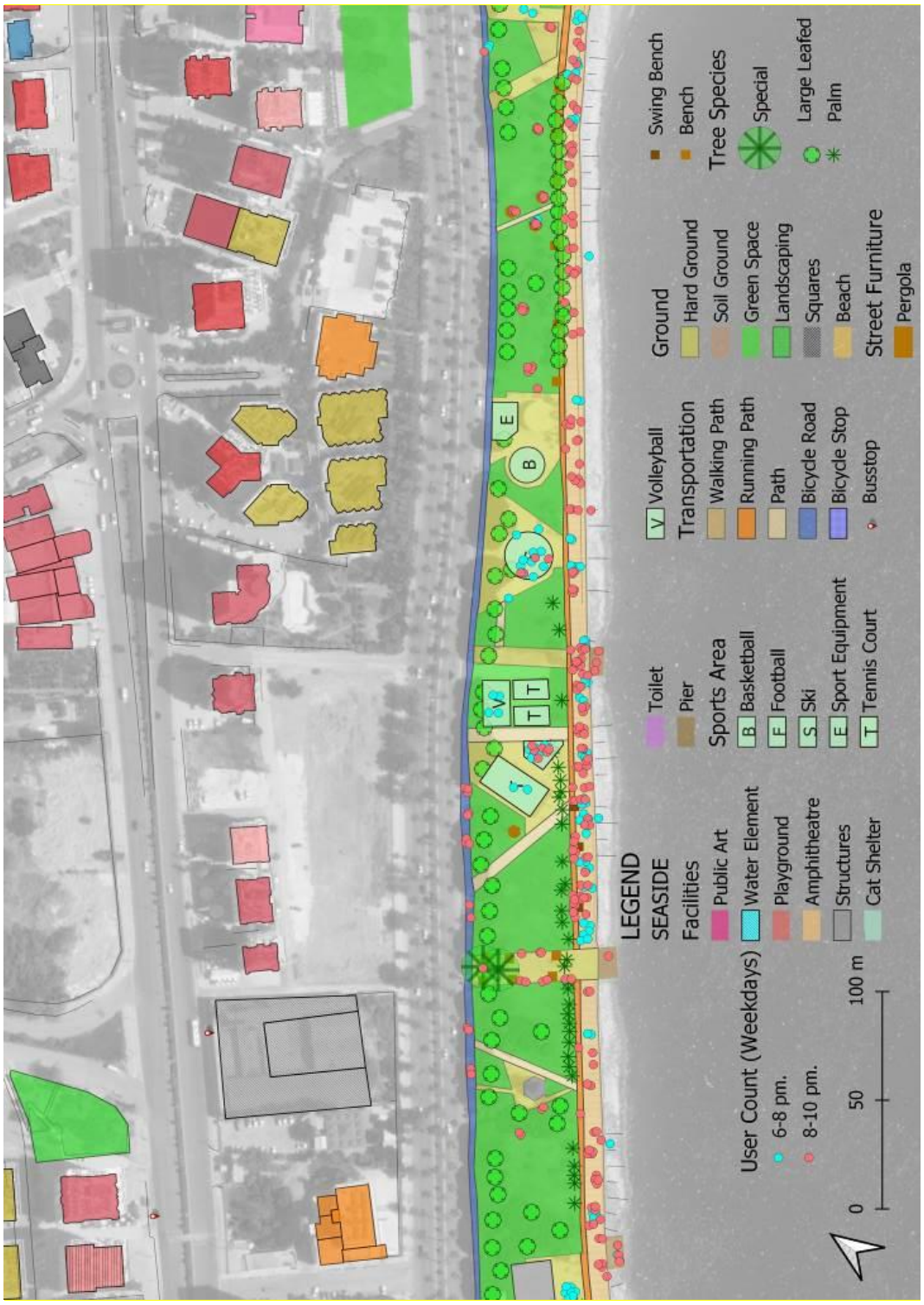


Figure 6.11. The spatial distribution of users in Weekdays for Zone-2 (the eastern side of Yenişehir Campus).

Figure 6.12. The spatial distribution of users in Weekdays for Zone-2.

6.2.2 Relation with the Sea

When we evaluate the relationship between the users and the sea based on user counts, different sub-regions emerge in the case study area. Especially the natural beach to the east of the Marina stands out as an important and critical place in the entire study area. This area becomes an important urban public space during the week and at the weekend. In addition to the active use of the beach and the surrounding embankments, the remaining sports areas, recreation areas and hard ground areas constitute an important focus within the study area. Figure 6.13-14-15 indicate those accumulations or density of users in a relation with the sea and other facilities.

In addition to natural beach, the embankment along the coastline to strengthen the relation with sea constructed piers, concrete decks of platforms create other foci in case study area. In the case study area, while there is a linear movement along the coastline as walking and jogging activities, the platform and piers built in the form of windows or niches opening towards the sea side of the coastline strengthen the relationship of the recreation area with the sea. In this way, these areas constitute sub-regions within the study area with publicity of public space. The impact of these sub-regions in the study area is seen both in embankment area and in open areas. These effects would be easily followed by user counts.

a. *Weekday Morning*

b. *Weekend Morning*

Figure 6.13. The distribution of users in natural beach and its surrounding area (Morning)

a. *Weekday Mid-day*

b. *Weekend Mid-day*

Figure 6.14. The distribution of users in natural beach and its surrounding area

a. Weekday Evening

b. *Weekend Evening*

Figure 6.15. The distribution of users in natural beach and its surrounding area

Figure 6.16. The distribution of users on piers and platforms along the Coastal Park and their near surrounding area

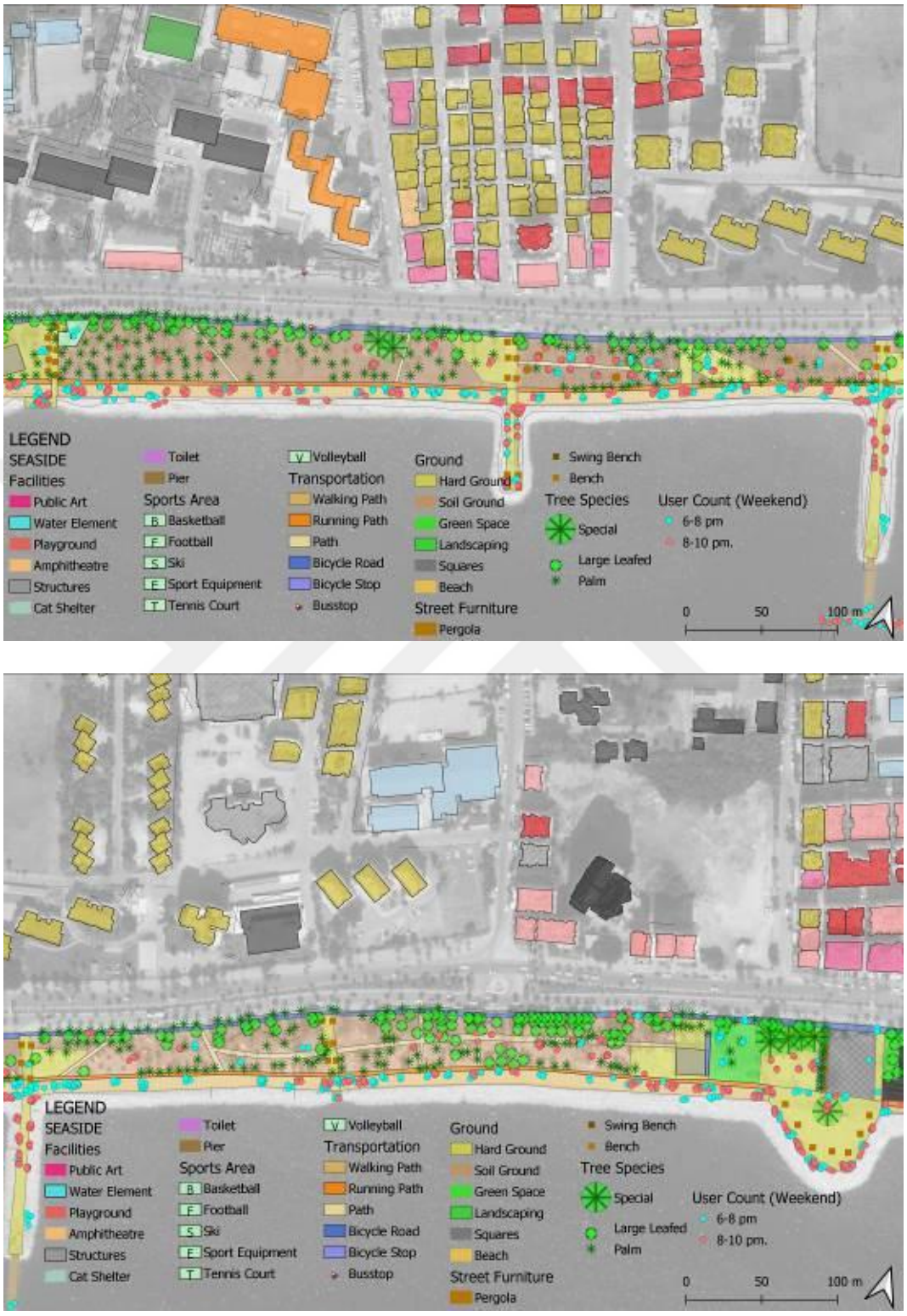


Figure 6.17. The distribution of users on piers and platforms along the Coastal Park and their near surrounding area

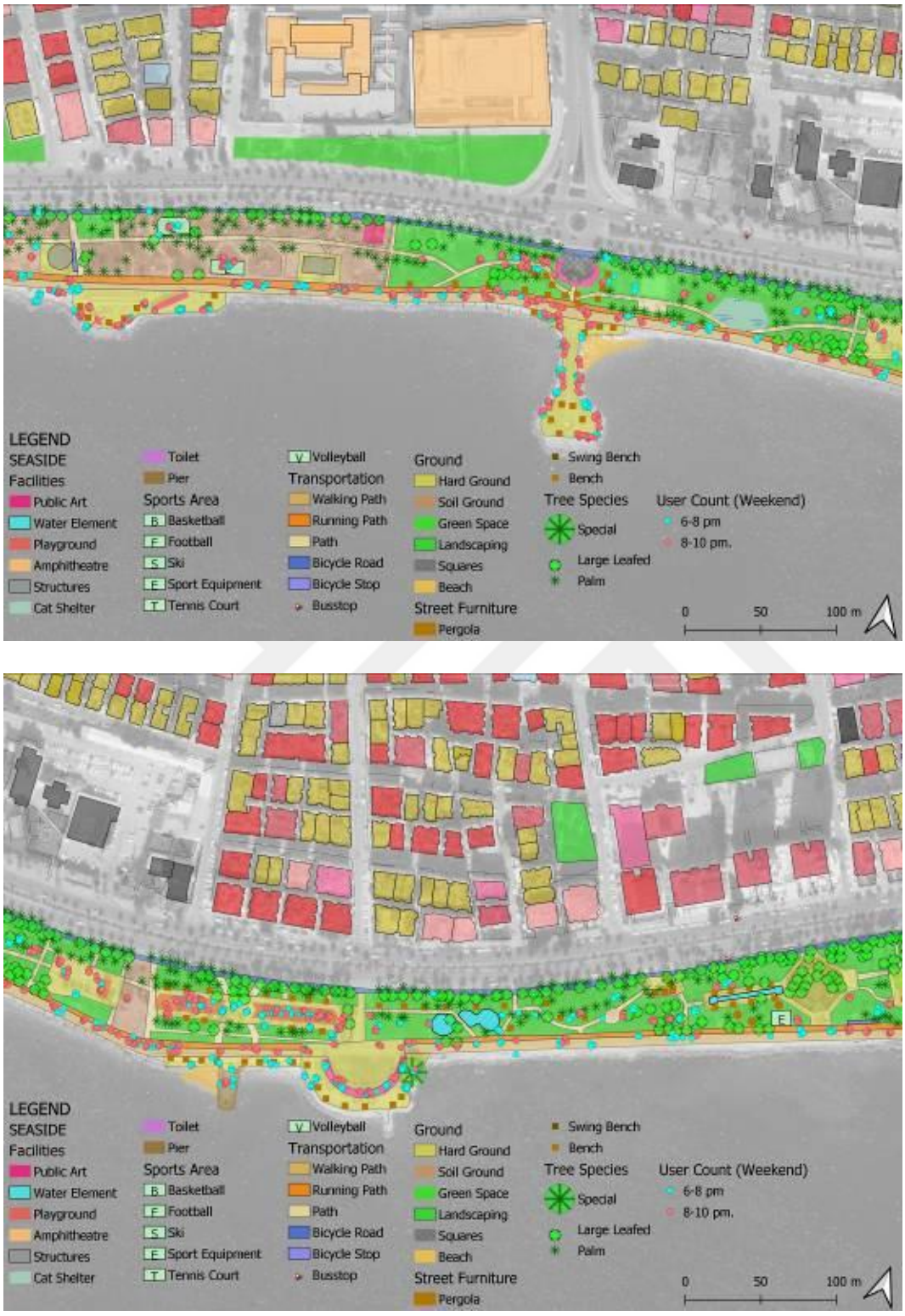


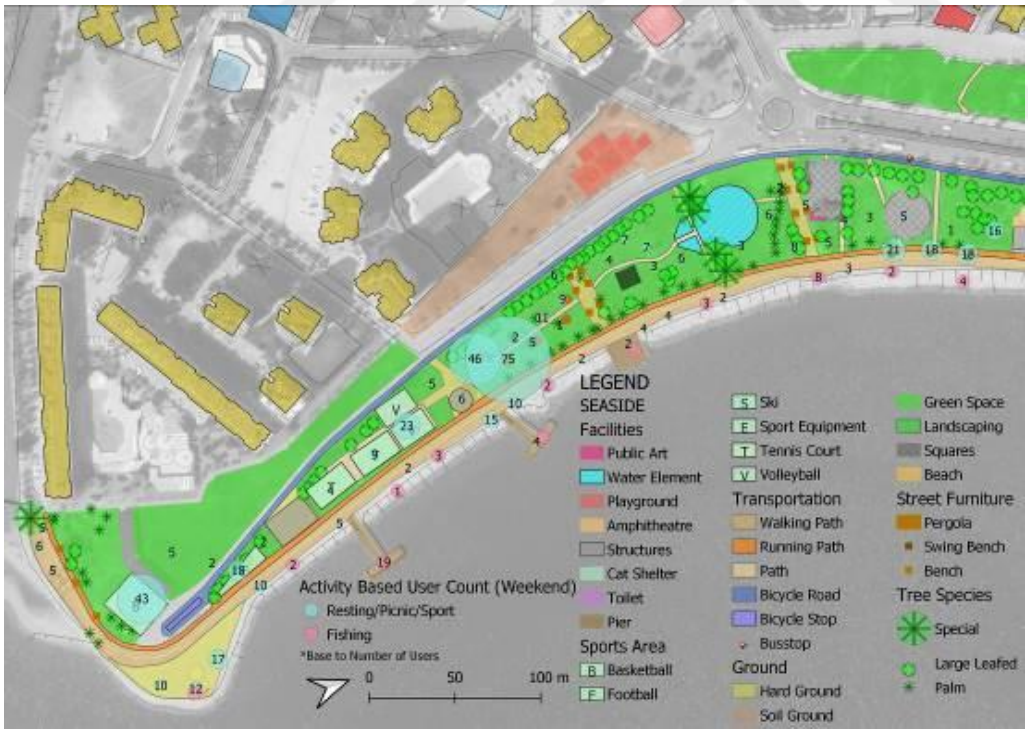
Figure 6.18. The distribution of users on piers and platforms along the Coastal Park and their near surrounding area

6.2.3 Recreational Facilities

Although all of the case study area is a recreation area, pergolas, rest areas and open space arrangements define sub-regions. When an assessment is made on the sub-regions, it is seen that the most important factor in the use of recreation areas is the time factor. When we make an evaluation on the use of the same areas during the week and at the weekend, it is seen that the facilities such as pergola and picnic table are used more intensely at the weekend. When we look at the distribution of users during the day, the number of users increases in the evening and evening hours.

Sports facilities, structures and areas closer to playgrounds within the recreation area are extensively used. When we make an evaluation on sub-regions, it is seen that Zone-3 is used less than other areas. This may be due to the fact that trees in the area, especially palm trees, do not create shadows and are not functional even if they have a visual integrity. Furthermore, due to the thin cross-section of this area, functional sub-regions cannot be formed.

Weekdays



Weekend

Figure 6.19. The number of users in a weekday and weekend

CHAPTER 7

CONCLUSION

In conclusion, first of all, the summary of research is presented to evoke main remarks for key terms. Then, main findings are briefly identified. After that, the contributions of study are listed in detail. Then, the limitations of research related with main question, its socio-spatial context and especially field investigation and time-limits are explained. Finally, further researches are suggested to emphasize possible contributions of the dissertation.

7.1 Summary of Research

In general discourse, squares and streets those are belonged to the society would be defined as public space. Recreative areas, parks or most of the open spaces or public buildings could be also evaluated as varying forms of public space. In addition to them, private-owned public space like shopping malls become a topic for social sciences. Therefore, making public space has been a challenging issue for planning and urban design. In defined context, the study evaluates the role of mobility and pedestrian behaviour in making public space that has been transformed, expanded, or shrunk with varying meanings. Making public space is determined a term including not only ownership or publicity, but also efficient and effective use of space. In the research, pedestrian is emphasized with quantitative and qualitative aspects together as a socio-spatial term instead of transportation calculations based on space-syntax approaches. The study focuses on publicly owned open spaces would not be effectively used because of varying issues as planning and urban design issue including user's perception and routines. In a relation with main research question "What is the role of pedestrian and mobility in making public space (space to place progress)?" sub questions: "How could public space conceptualize as a socio-spatial

term?", "What is pedestrian and pedestrian behaviour?", and "How can be mobility and pedestrian movement measured in public space?" have been answered in different context. By the way, the study developed a clear assessment method in planning and urban design with the indicators of mobility and pedestrian behaviour for making public space.

The literature review examined pedestrian in public space as a comprehensive term that is not only a transportation mode, but also essential component of making public space for themselves. Therefore, the terms of space and place are clarified and then public space is investigated in detail to get variables of making public space. Especially Gehl (2010) underlines that the quality of space has direct impact on optional and social activities, vice versa, activities and users emphasize a sense of place.

According to literature review, the quality of public space is a component of the quality of life and liveability, which would be evaluated according to the role of movement of pedestrian and mobility. In the study, mobility is investigated with accessibility, impact zone, recreational facilities, services and amenities as key indicators. Accessibility is a physical component of making public space. Similarly, impact zone would be seen as relations between public space and its near environment. The availability of public recreational facilities and their spatial distribution in public space is defined as another component.

Similarly, safety, aesthetic quality, connectivity, comfort, attractiveness, personal characteristics and time are determined as set of variables for pedestrian behaviour. Especially, physical and perceived safety are investigated by different methods, because of its impacts on attitudes of users (Maslow, 1954: 39-40). Aesthetic quality is discussed within satisfactions by values of users and human scale. Continuity and maintenance of pedestrian routes are evaluated to understand connectivity. Physical and environmental aspects of comfort effecting pedestrian behaviour and attractiveness are determined as main indicators for pedestrian behaviour. Personal characteristics and time factor, which have significant impacts on pedestrian

behaviours, are determined as crucial determinant of pedestrian mobility in public space.

According to aspects and indicators of mobility and pedestrian behaviour for making public space, the method of study is designed as two main parts as theoretical framework and case study. Theoretical research includes mobility and pedestrian behaviour in public space to determine key determinants and measures. The variables are studied as inner and outer dimensions of mobility and pedestrian behaviour. At that point, a pioneer model is developed to evaluate both qualitative and quantitative aspects of mobility and pedestrian behaviour. Inner and outer dimensions of mobility and pedestrian behaviour are determined to understand eligible or limited factors for planning and urban design strategies in the process of making public space. In the second part, those variables are tested or discussed in the case study area.

Mersin Coastal Park starting from Hilton Hotel at the east to Mezitli Stream at the west is selected as case study area. In Mersin, acquiring public spaces has been a difficult issue due to the limited public lands, so coastal area had been filled to get a boulevard and a recreation area as a planning strategy of 1990s. The historical development of case study area is chronologically and spatially studied to present the formation and development of case study area as a recreational public space. Todays, case study area is legally, in terms of current plans, and physically a public owned recreation area. However, the distribution of activities or users along the Coastal Park is not homogenous, because of varying qualities or characteristics of public space. The dissertation presents these varieties then evaluates the context of Mersin Coastal Park to indicate the role of pedestrian behaviour and mobility in making public space.

Fieldworks, observations, questionnaires and interviews are primary sources of the study in addition to obtained data from related institutions. A research project financed by TÜBİTAK-1002 (The Scientific and Technological Research Council of Turkey - Short Term Research and Development Funding Program) is helpful to get primary sources.

In the scope of field studies, extensive and intensive surveys are completed to define structural conditions of the site, to analyse the main landmarks and spatial relationships with their functions, nodes and boundaries, to monitor impact zones, to evaluate user's profiles and their attitudes, and to count them with task areas or daily routines such as walking, jogging or fishing. In defined context, the frequency, means and duration of use are observed to understand pedestrians' roles in making public space. Two sets of questionnaire are implemented in case study area to get needs, expectations and routines of pedestrians in case study area. The first set includes 1000 questionnaires (%0,01 sample rate of the Metropolitan Population of Mersin) and the second one compromise 2000 questionnaires (%0,02 sample rate) are completed in Fall 2018 and Summer 2019 to get an overall look to seasonal changes in Mersin Coastal Park. Furthermore, a local index of pedestrians' priorities is prepared to understand dynamics, expectations, factors, and especially preferences of users in Mersin Coastal Park. Geographical Information System (GIS) is used as a tool or spatial analysis of the result of questionnaires, local index and field observations. As a result of preliminary evaluations, the Coastal Park is evaluated in three sub-zones, which are meaningful bases for comparison of their characteristics according to mobility and pedestrian behaviour. As result of those sets of comparison, variable by variable, Mersin Coastal Park is analysed as varying character zones, their context and potential. In addition to the comparison over the sub-zones, comparisons are made to capture routines and rhythms in case study area with similar functions-facilities or togetherness of them for making public space.

7.2 Main Findings

In this section, main findings of the study are evoked to affirm pedestrian as a way to make places for themselves, not just a transportation mode. Pedestrians has embedded relations with making public space, which would be meaningful by people. Before the study, the role of pedestrian and mobility in public space in terms of openness, inclusiveness, and accessibility are not properly discussed.

However, in any case, making public space is a challenging planning and urban design issue base on the critical role of people and their emergence as a pedestrian. Therefore, the study identifies the components of mobility and pedestrian behaviour on a clear structure as a preliminary finding including; space and place terms, publicity or publicness and making public space. In the second part of literature review and case study reach the quality of public space is developed based on pedestrian and their movement in the public space. In this context, studies on mobility and pedestrian behaviour are examined by referring key measures of public space as mobility and pedestrian behaviour.

The pioneer model of the study allows that comparative analysis of inner and outer factors of mobility and pedestrian behaviour. This model is a unique approach for public space in terms of pedestrian movement. In defined context, the indicators of mobility and pedestrian behaviour are defined as a set of measure determined. As mentioned before, field studies, processing datasets and visual analysis are completed by the support of TÜBİTAK-1002 (The Scientific and Technological Research Council of Turkey - Short Term Research and Development Funding Program).

In addition to questionnaires, short-interviews are made with users to evaluate and rank their expectations, needs and preferences for public space. By the way, local pedestrian index for Mersin Coastal Park is obtained according to total grades (1-5) of each aspect, average result indicates a local index corresponding the level of factors in making public space with inner and outer determinants of pedestrian behaviours and mobility. Presenting the components of pedestrian behaviour and mobility on same model and comparing them over sub-zones let us to understand characteristics of such areas and its potential to make public space. Single components like functions, facilities, attractiveness or safety are not sufficient for making public space. The research obviously indicates essential role of pedestrian for making public space by comprehensive relations of each factor and their togetherness.

Consequently, public space does not refer to ownership or property rights of an area. Or, having a public function, such as a school, administrative unit or square, does not

mean an effective and efficient public space. Making public space is a challenging issue for planning and urban design with its inner and outer dimensions of pedestrian behaviour as main users and mobility. However, planning tools and strategies or urban design are limited by affordable and eligible variables. In defined context, the set of methods and variables within the model of study describes a process that can be used to evaluate the role of pedestrian behaviour and mobility in making public space.

Single independent variables have limited meanings for making public space. Public space has to include "social-cultural functions" with reciprocal and integrated physical aspects. In other word, physical quality would enrich and emphasize socio-cultural functions. Zone-1 in Mersin Coastal Park include different facilities together with different user's profile. Moreover, its width and safety have impacts on user's preferences. People prefers to use Zone-1 more than other zones. Main activities related with recreation emphasize the probability for increasing number of users and increasing density, may be, because of the lack of facilities in residential neighbourhoods.

Increasing number of users in a specific area means increasing density may cause a negative impact on users, because of feeling of crowded. However, the study indicates that, in a large-scale recreational area, increasing density of users and sort of activities let to emerge a sense of place for defined areas.

7.3 The Contributions of the Study

The dissertation has different contributions from literature review to urban planning implementations. First of all, updated literature review on mobility and pedestrian behaviour in the context of public space and defined sets of variables is an important contribution for similar researches. In other words, a thorough literature survey was conducted in comparative and systematic way (on mobility, accessibility and walkability, public space quality and pedestrian behaviour). One of the contributions

of the thesis is that it brings together quantitative methods (on mobility) and qualitative research methods on pedestrian behaviour –environment relations.

Mainly, in the thesis study, a research and evaluation method for the assessment of (urban) public open spaces in general and of the waterfront in particular is developed. The method which was developed is applied and tested in the case of the coastal recreational strip of Mersin. The application of the method in this case study proves the relevance of the method in general; however, it also revealed a number of shortcomings are related with the headings of comfort, safety, attractiveness and aesthetical quality in particular.

The study documented general characteristics and use of Coastal Park which are mostly obtained by infill operations and investigated such sites that would be similar problem in Turkey or international context.

Furthermore, the study underlines that, making public space is not just an ownership or land-use problem. Recreational areas would gain the characteristics of public space by the use of varying groups in different periods.

The filling areas break down the context of Coastal Park with long-distance from impact zones. Therefore, natural boundaries and physical contact with the Sea become more essential than other recreational activities. As mentioned above, unique natural beach in Zone-2 is the most crowded and popular place in case study area.

Similarly, if the same activities and opportunities are provided, the area must be supplied from impact zone to be usable. Therefore, benefits and loose analyses base on distance would be helpful.

Lastly, the study proves that aggrandized areas with over-design elements are not appropriately used. Simple and handy designs and planning strategies will make contribution to daily life.

7.4 The Limitations of the Study

Since the study was supported by TÜBİTAK, the limitations on field study and questionnaire were largely overcome. However, there are some limitations due to the socio-spatial context and climate structure of Mersin.

As stated in the section of questionnaire, the metropolitan population of the city is more than 1 million. In addition to this population, there is a significant Syrian population living permanently in the city due to the Syrian civil war in the last 5 years. There are two main limitations of this situation.

Within a city of 1 million inhabitants, there is no other similar open area available to all citizens. Therefore, some parts of the sample study area are used not because they are public spaces but because there are no alternatives, even if they are of low standard. It is not possible to make this distinction fully.

The second important limitation is the intensive and continuous use of open spaces in the whole city, especially by the Syrian population. The intensive use of open spaces by immigrants with different expectations in urban areas partially prevents the local people of Mersin from using these areas. This situation needs to be studied separately with psychological and sociological perspectives.

In addition to the socio-spatial structure, the scope of the study and the size of the study area revealed another limitation. With the support of TÜBİTAK, field works were completed in the spring and summer months of 2019. The use of case study area in other seasons and under different weather conditions could not be evaluated.

Finally, as mentioned above, the study area is the only large-scale open area in the city as a whole. Therefore, there are users from all over the city and from different groups. If the access and access patterns of these groups could be worked as a destination-orientation network, an assessment could be made on the adequacy of social infrastructure and recreational facilities. However, the questioning could only be made through the name of the neighbourhood. Therefore, the evaluation on living area and case study area is completed with general assumptions.

7.5 Further Researches

With the completed study, an evaluation model on the role of the pedestrian and movement in the formation of public space has been established. Therefore, there are further studies that can be performed using this model.

First, based on research on coastal landfills designed as a parking area, the area can be built on landfills in comparison with similar qualifications in Turkey. In this context, especially the coasts of Izmir and Istanbul and the Black Sea cities can be studied comparatively. Evaluation of successful and unsuccessful implications are possible.

The study on the embankment area of Mersin which emerged at the end of the 1990s can be compared by applying it in the historic city centre where stronger traces are preserved as a port city.

In addition to other case studies, the results of study can be evaluated and criticized by different tools like the statistics of social media platforms like Facebook and Instagram. The spatial statistics of social media in Mersin Coastal Park, which includes photographs of different public space, could be examined, too.

Considering the principles laid down for public and open space quality, neighbourhood based studies can be conducted in sub-regions of Mersin city as a whole. For example, different urban patterns developed with planning decisions in different periods.

REFERENCES

Adıyeke, N. and Adıyeke, N. (2004). Modernleşmenin Doğurduğu Kent: Mersin, in Özdem F. (ed.), *Sırtı Dağ Yüzü Deniz: Mersin, Yapı Kredi Yayınları,* İstanbul.

Akkar, M. (2005). The changing 'publicness' of contemporary public spaces: A case study of the Grey's Monument Area, Newcastle upon Tyne. *Urban Design International*. 10: 95-113.

Akkar Ercan, M. (2007). Public Spaces of Post-Industrial Cities and Their Changing Roles, *METU Journal of Faculty of Architecture*, 24/1:115-137

Akkar Ercan, M., & Memlük, N. O. (2015). More inclusive than before? The tale of a historic urban park in Ankara, Turkey. *Urban Design International*, *20*(3), 195-221.

Akkar Ercan, M., & Belge, Z. S. (2017). Daha Yaşanabilir Kentler İçin Mikro Ölçek Bir Yürünebilirlik Modeli, *METU Journal of the Faculty of Architecture, 34(1).*

Altman, I & E. Zube (Eds.) (1989). *Public Places and Spaces*. Vol. 10, Human Behaviour and Environment. New York: Plenum

Antonini, G., Bierlaire, M., & Weber, M. (2006). Discrete choice models of pedestrian walking behavior. *Transportation Research Part B: Methodological*, *40*(8), 667-687.

Appleyard, D., Gerson, M. S., & Lintell, M. (1981). *Livable streets, protected neighborhoods*. University of California Press.

Appleyard, D. (1981). *Livable Streets*, University of California Press, Berkeley, CA.

Babalik-Sutcliffe, E. (2013). Urban form and sustainable transport: Lessons from the Ankara case. *International Journal of Sustainable Transportation*, *7*(5), 416-430.

Barlas, A. (2006). *Urban Streets and Urban Rituals*, METU Publications, Ankara.

Barlas, A. and Şentürk, M. (2011). Urban identity in The Age of the mobile phone. *METU JFA, 1(28)*, 1.

Banerjee, T. & Southworth, M. (Eds.). (1995). *City sense and city design-Writings and projects of Kevin Lynch*. Cambridge, MA: The MIT Press

Benjamin, W. (1995). *Pasajlar*. DABAA.

Belge, Z.S. (2012). *Increasing Walkability Capacity of Historic City Centres: the Case of Mersin*, unpublished Master Thesis, METU, Ankara, http://etd.lib.metu.edu.tr/upload/12614768/index.pdf

Beukes, E., & Van Der Colff, A. (1997). Aspects of the quality of life in black townships in a South African city: implications for human development. In *Quality of Life in South Africa* pp. 229-250. Springer, Dordrecht.

Beyhan, B., & Uğuz, S. (2002). Modernity's imprints on Mersin: a reinterpretation. In *colloquium Mersin, the Mediterranean, and Modernity: Heritage of the Long Nineteenth Century (19. Yüzyılda Mersin ve Akdeniz Dünyası), Selim Ofset, Mersin* (pp. 86-101).

Bilsel, F.C. (2009). Yeni Dünya Düzeninde Çözülen Kentler ve Kamusal Alan: İstanbul'da Merkezkaç Kentsel Dinamikler ve Kamusal Mekan Üzerine Gözlemler, *https://kendineaitbiroda.wordpress.com/2009/08/01/yeni-dunya-duzeninde-cozulen-kentler-ve-kamusal-alan-istanbulda-merkezkac-kentsel-dinamikler-ve-kamusal-mekan-uzerine-gozlemler-yazar-cana-bilsel/.* Accessed in September 2018.

Bilsel, F.; Bouche, P.; Secci, C.; Demir Mischenko, E.; Zorlu, F.; Belge, Z.S.; Lebarbey, C. (2016). *"Mersin Kent Merkezi'ni Yeniden Keşfetmek: Bir Kentsel Tasarım Stratejisi Olarak Yürümek". In Rediscovering Mersin City Center by Walking*; International Urban Design Workshop, Mersin.

Birch, E. L. (2007). Public and Private Space in Urban Areas: House, Neighbourhood, and City. In *Handbook of community movements and local organizations* (pp. 118-128). Springer US.

Black, A. (1995). *Urban mass transportation planning*, McGraw-Hill, USA

Bosselmann, P. (2008). *Urban Transformation: understanding city design and form*, IslandPress, Washington.

Burden, D. (1995). *Walkable Communities, Twelve Steps for an Effective Program, the Florida Department of Transportation*, State Safety Office.

Burden, D. (2000). *Street Design Guidelines for Healthy Neighborhoods*, Transportation Research Board

Carmona M., De Magalhaes C. and Hammond L., (2008) *Public Space, The Management Dimension*, Routledge.

Carmona, M., Heath, T., Oc, T., Tiesdell, S. (2010). *Public Places – Urban Spaces*, Architectural Press, Oxford.

Carmona, M., & Wunderlich, F. M. (2012). *Capital spaces: the multiple complex public spaces of a global city*. Routledge.

Carr, S., Francis, M., Rivlin, L.G. and Stone, A.M. (1992). *Public Space*. Cambridge: Cambridge, University Press.

Carr, S. & K. Lynch. (1981). Open space: Freedom and control. In L. Taylor (Ed.), *Urban Open Spaces*. New York: Rizzoli.

Crankshaw, N. (2009). *Creating vibrant public spaces: Streetscape design in commercial and historic districts*. Washington, DC: Island Press.

De Magalhães, C. (2010). Public space and the contracting-out of publicness: A framework for analysis. *Journal of Urban Design*, *15*(4), 559-574.

De Magalhães C., & Trigo S.F. (2015). *Private Management of the Urban Public Realm,* http://www.rics.org/Global/Private_urban_realm_021015_dwl_aj.pdf, accessed in November 2015.

Das, D. (2008). Urban Quality of Life: A Case Study of Guwahati *Social Indicator Researches* 88: 297-310

Dissart, J., & Deller, S.C., (2000). Quality of Life in the Planning Literature *Journal of Planning Literature*, 15: 135 – 161

Divall, C. (2011). Transport History, the Usable Past and the Future of Mobility. In *Mobilities: New Perspectives on Transport and Society*, ed. M. Grieco and J. Urry. Farnham: Ashgate, pp. 305-320

Duany, A., Speck, J., and Lydon, M. (2010). *The Smart Growth Manual*. United States of America: McGraw-Hill.

Heritage, E. (2000). Power of Place: The future of the historic environment.

Entrikin, J.N. (1989). Place, region and modernity. In Agnew, J.A. and Duncan, J.S., editors, *The power of place*, London: Unwin and Hyman, 30–43.

Evans, G. (2009) Accessibility, Urban Design and the Whole Journey Environment. *Built Environment* 35(3) 365-385.

Evans, G. (2015, March). Accessibility and user needs: pedestrian mobility and urban design in the UK. In *Proceedings of the Institution of Civil Engineers-Municipal Engineer* (Vol. 168, No. 1, pp. 32-44). Thomas Telford Ltd.

Ewing, R., & Clemente, O. (2013). *Measuring urban design: Metrics for livable places*. Island Press.

Ewing, R., & Handy, S. (2009). Measuring the unmeasurable: Urban design qualities related to walkability. *Journal of Urban design*, 14(1), 65-84.

Francis, M. (1987a), Urban open spaces. pp. 71-106 in E. Zube & G. Moore (Eds.). *Advances in Environment, Behaviour and Design. Vol. 1.* New York: Plenum.

Francis, M. (1987b.) The making of democratic streets. pp. 23-39. In A. Vernez Moudon (Ed.) *Public Streets for Public Use.* New York: Van Nostrand Reinhold.

Francis, M. (1988). Changing values for public spaces. *Landscape Architecture, 78*: pp. 54-59.

Francis, M. (1989). Control as a dimension of public space quality. pp. 147-172. In I. Altman & E. Zube (Eds.). *Public Places and Spaces. Vol. 10, Human behavior and environment.* New York: Plenum.

Francis, M. (2003). *Urban Open Space*. Washington, DC: Island Press

Forsyth, A., & Southworth, M. (2008). Guest Editorial: Cities Afoot—Pedestrians, Walkability and Urban Design, *Journal of Urban Design 13(1)* 1-3.

Foucault, M. (2002). *Archaeology of Knowledge*. London: Routledge

Gehl, J. (1987). *The Life between Buildings*. New York: Van Nostrand Reinhold.

Gehl, J., & Gemzøe, L. (1996). *Public Spaces - Public Life*, The Danish Architectural Pres, Kopenhag.

Gehl, J., & Gemzøe, L. (2003). Winning back the public spaces. In *Sustainable Transport* (pp. 98-106). Woodhead Publishing.

Gehl, J. (2010). *Cities for People*, IslandPress, Washington&Covelo&London.

Gifford, R. (1987). *Environmental Psychology*, Allyn and Bacon, Newton, Mass.

Goodman R., & Tolley R., (2003). The decline of everyday walking in the UK: explanations and policy implications, In *Sustainable transport, Planning for walking and cycling in urban environments* (Ed. Rodney Tolley) Woodhead Publishing Ltd.

Goffman, E. (1963). *Behavior in Public Places: Notes on the Social Organization of Gatherings*, The Free Press, New York.

Goffman, E. (1971). *Relations in Public: Micro Studies of the Public Order*, Harper Colophon Books, New York.

Grosz, E. (1995). *Space, Time and Bodies in Space, Time and Perversion: Essays on the Politics of Bodies*, Routledge, New York &London

Habermas, J. (2004). "Kamusal Alan". In *Kamusal Alan* (pp. 95-102). Meral Özbek (Ed.), İstanbul: Hil Yayınları.

Habermas, J. (2005). *Kamusallığın Yapısal Dönüşümü*. Tanıl Bora ve Mithat Sancar (Çev.), İstanbul: İletişim Yayınları.

Habitat II, BM. İnsan Yerleşimleri Konferansı (1996). Habitat Gündemi ve İstanbul Deklarasyonu: Hedef ve İlkeler, Taahhütler ve Küresel Eylem Planı.

Harvey, D. (1990). Between space and time: reflections on the geographical imagination1. *Annals of the Association of American Geographers*, *80*(3), 418-434.

Herzog, L. A. (2006). *Returning to the Center: Culture, Public Space and City Building in a Global Era.* Austin, TX: University of Texas Press.

Hisarlı, G. (1988). *Mersin Kenti Açık ve Yeşil Alanları Üzerine Bir Araştırma*, unpublished MA. Thesis, Çukurova University.

Hutabarat Lo, R. (2009). Walkability: What is it?, *Journal of Urbanism 2(2*) July 145-166.

Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Vintage.

Jacobs, A. B. (1995). *Great Streets*. Cambridge, Massachusetts: MIT Press

Jammer, M. (1954). *Concepts of Space: The History of Theories of Space in Physics*, Cambridge, Mass.

Jansen H., Banghert W., Moest W. (1938-39). Mersin Master Plan, TU Berlin Architekturmuseum, Inv. Nr; 23453, 23454 and 23545 [online] [accessed October 2019]. Available at: <https://architekturmuseum.ub.tu-berlin.de/P/158017.php - 158018.php - 158019.php

Johnson, P. (2002). *The Study on Pedestrian Behavior in Urban Space*. New York.

Kallerman, N. (2016). Detailed planning through the eyes of sustainability: Mobility, Green spaces and Safety.

Kaplan, R., Kaplan, S. & Ryan, R. L. (1998). *With People in Mind: Design and Management of Everyday Nature*. Washington, DC: Island Pres s.

Khairi, M.A.B. (2008). *The use of Walkable Street in the Area around Masjid India, Kuala Lumpur, Malaysia*. MS thesis, University Technology Malaysia, Faculty of Built Environment.

Kitazawa, K. & Batty, M. (2004). Pedestrian Behaviour Modelling, In: Van Leeuwen, J.P. and H.J.P. Timmermans (eds.) *Developments in Design & Decision Support Systems in Architecture and Urban Planning*, Eindhoven: Eindhoven University of Technology, ISBN 90-6814-155-4, p. 111-126.

Kolody, A.D. (2002) *Planning for Physical Activity, The Need for Comfortable and Convenient Pedestrian Movement in the Urban Form*, unpublished Master Thesis, The University of Calgary, Calgary.

Krambeck, H., & Shah, J. (2006). *The Global Walkability Index: Talk the Walk and Walk the Talk* [http://cleanairinitiative.org/portal/system/files/60499_paper.pdf] Accessed date (29.08.2014).

Kristensen, J. P., & Marshall, S. (1999). Mobility Management to Reduce Travel: The Case of Aalborg. *Built Environment* (1978-), 25(2), 138–150. R

Kürkçüoğlu E., & Ocakçı, M. (2015). Kentsel Dokuda Mekansal Yönelme Üzerine Bir Algı-Davranış Çalışması: Kadıköy Çarşı Bölgesi, *MEGARON*, 10(3), 365-388.

Lambert, K., (2005). *A Critical Evaluation of Livability in Garrison Woods,* unpublished Master Thesis , University of Calgary, Calgary.

Lang, J. (1987). Creating architectural theory. *The role of the behavioral sciences in environmental design*.

Lang, J. (1994). *Urban design: the American experience*. John Wiley & Sons.

Langstraat, F., & Van Melik, R. (2013). Challenging the 'end of public space': A comparative analysis of publicness in British and Dutch urban spaces. *Journal of Urban Design*, *18*(3), 429-448.

Lefebvre, H. (1991). *Critique of everyday life: Foundations for a sociology of the everyday (Vol. 2)*. Verso.

Lefebvre, H. (2014). *Mekânın Üretimi*, İstanbul.

Lefebvre, H. (2017). *Ritimanaliz, Mekan, Zaman ve Gündelik Hayat,* Sel Yayıncılık, İstanbul.

Lennard, S. H. C. & H. Lennard. (1984). *Public Life in Urban Places*. South Hampton, N.Y.: Gondolier Press.

Litman, T. (2011). *Measuring Transportation: Traffic, Mobility and Accessibility, Victoria Transport Policy Institute*. http://www.vtpi.org/measure.pdf. Accessed in October, 2018

Liu, J. (2016). Redefining Urban Alleywalls: Urban Design for Active Public Space in Maynard Alley, Chinatown-International District, Seattle, Master Thesis, University of Washington, https://digital.lib.washington.edu/researchworks/handle/1773/37257, accessed in October, 2018.

Lofland, L. H. (2017). *The public realm: Exploring the city's quintessential social territory*. Routledge.

Longo, G. (1996). *Great American Public Places*. New York: Urban Initiatives

Lynch, K. (1960). *The Image of the City*, The MIT Press, Cambridge, Massachusetts.

Lyons, G. (2011). Technology Fix versus Behaviour Change. In Mobilities: New Perspectives on Transport and Society, ed. M. Grieco and J. Urry. Farnham: Ashgate, pp. 159-177

Madanipour, A. (1996). *Design of Urban Space: An Inquiry into a Socio-spatial Process*, University of Newcastle, Newcastle upon Tyne, UK

Marans, R.W. (2003). Understanding environmental quality through quality of life studies: the 2001 DAS and its use of subjective and objective indicators, *Landscape and Urban Planning*, Vol. 65, Issues1-2, pp.73-83

Marshall, S. (1999). Restraining Mobility While Maintaining Accessibility: An Impression of the'City of Sustainable Growth'. *Built Environment (1978-)*, 168-179.

Marshall, S. (2005). *Streets and patterns*, Spon Press, New York

Maslow, A. H. (1954). *Motivation and Personality*. New York: Harper and Row.

Massam, B.H. (2002). *Quality of Life: Public Planning and Private Living Progress in Planning* 58 141 – 227

Mateo-Babiano, I. (2016). Pedestrian's needs matter: Examining Manila's walking environment. *Transport Policy*, 45, 107-115.

Mateo-Babiano I. and Ieda H. (2007). Street Space Sustainability In Asia: The Role of the Asian Pedestrian and Street Culture, *Journal of the Eastern Asia Society for Transportation Studies*, Vol. 7, 1915-30.

Montgomery, J. (1998). Making a city: Urbanity, vitality and urban design, *Journal of Urban Design*, 3:1, 93-116

Moore, R. C. (1987). Streets as playgrounds. pp. 45-62, In A. Vernez-Moudon (Ed.) *Public Streets for Public Use*. New York: Van Nostrand Reinhold.

Moughtin C., Oc T. and Tiesdell S. (1999) Urban Design: Ornament and Decoration (2nd ed.). London: Architectural Press

Moughtin, C. & Mertens, M. (2003). *Urban Design: Street and Square* (3rd ed.). London: Architectural Press.

Mumford, L. (1970). *The Culture of Cities*. New York: Harcourt Brace Jovanovich.

Nasar, J. L. (1989). Perception, cognition, and evaluation of urban places. In *Public places and spaces* (pp. 31-56). Springer, Boston, MA.

Németh, J., & Schmidt, S. (2011). The privatization of public space: modeling and measuring publicness. *Environment and Planning B: Planning and Design*, *38*(1), 5-23.

Özbek, M. (2004). *Kamusal alan*. Hil.

Paddison, R., & Sharp, J. (2007). Questioning the end of public space: Reclaiming control of local banal spaces. *Scottish Geographical Journal*, *123*(2), 87-106.

Papadimitriou, E., Yannis, G. & Golias, J. (2009). A critical assessment of pedestrian behaviour models, *Transportation Research* Part F 12, 242-255.

Pedestrian and Streetscape Guide (2003), *Georgia State Department of Transportation.* http://www.bikewalk.org/pdfs/sopgeorgia_ped_streetscape_guide.pdf, accessed 14 June 2011.

Peponis, J. & Wineman, J. (2002). Spatial structure of environment and behavior, in *Handbook of environmental psychology* (Eds R Bechtel, A Churchman), John Wiley and Sons, New York, 271-291.

Porteous, D.J. (1977). *Environment and Behavior: Planning and Everyday Life*, Addison-Wessley Reading, Mass

Rapaport, A. (1987). *Pedestrian Street Use: Culture and Perception: Public Street for Public Use*, McMillan, Agincourt Ontario, Canada.

Resuloğlu, Ç. (2011). *The Tunali Hilmi Avenue, 1950s-1980s: The Formation of a Public Place in Ankara*, unpublished Doctorate Thesis in the Graduate School of Social Sciences of Middle East Technical University, Ankara.

Rode, P., Christian, H., Jens K., Duncan, S. and Andreas, G. (2015). Toward New Urban Mobility: The case of London and Berlin. Peter Griffiths (ed). *LSE Cities/InnoZ*. London School of Economics and Political Science: London

Rudofsky, B. (1969). *Streets for People*. New York: Doubleday.

Sarıbay, A. Y. (2000). *Kamusal alan, diyalojik demokrasi, sivil itiraz*. Alfa Yayınları.

Schrank, D., Lomax, T., & TTI's, B. E. (2011). Urban mobility report. Texas Transportation Institute, The Texas A and M University System, 2007.

Sellers, B. (2003). Designing streets for people. In *Sustainable transport, planning for walking and cycling in urban environments* (Ed. Rodney Tolley) Woodhead Publishing Ltd.

Shortell, T. (2016). Walking as Urban Practice and Research Method. In E. Brown, & T. Shortell (Eds.), *Walking in Cities: Quotidian Mobility as Urban Theory, Method and Practioce* (pp. 1-16). Philadephia: Temple University Press.

Simonsen, K. (1996). What kind of space in what kind of social theory?. *Progress in Human geography*, *20*(4), 494-512.

Sisiopiku, V.P, Akın D. (2003). Pedestrian behaviors at and perceptions towards various pedestrian facilities: an examination based on observation and survey data, *Transportation Research* Part F 6 , 249-274.

Soja, E. W. (1980). The socio-spatial dialectic. *Annals of the Association of American geographers*, *70*(2), 207-225.

Southworth, M., & Lynch, K. (1974). *Designing and managing the strip*. Joint Center for Urban Studies of MIT and Harvard University.

Southworth, M. & Owens, P.M. (1993). The Evolving Metropolis: Studies of Community, Neighborhood, and Street Form at the Urban Edge, *Journal of the American Planning Association*, 59:3, 271-287

Southworth, M. (1997). Walkable Suburbs?: An Evaluation of Neotraditional Communities at the Urban Edge, Journal of the American Planning Association, 63:1, 28-44.

Southworth, M. & Ben-Joseph, E. (2003). *Streets and the Shaping of Towns and Cities*, Island Press.

Southworth, M. (2005). Designing the Walkable City, *Journal of Urban Planning and Development*, 131:4, December, 246-257.

Steiner, F. & Butler, K. (eds.) (2007), *Planning and Urban Design Standards*, students' edition, New York: John Wiley & Sons, Inc.

Strohmeier, F. (2016). Barriers and their influence on the mobility behavior of elder pedestrians in urban areas: challenges and best practice for walkability in the city of Vienna. *Transportation research procedia*, *14*, 1134-1143.

Tekeli, İ. (2008). Bir Plancı/Araştırmacının Yöntem ve Ötesine İlişkin Arayışları. *FLSF Felsefe ve Sosyal Bilimler Dergisi*, (6), 1-25 .

Tekeli, İ. (2010). *Toplu eserler (12) Gündelik yaşam, yaşam kalitesi ve yerellik yazıları*. Tarih Vakfı.

The Metropolitan Municipality of Mersin (MMM) (2016). The Report of 1/5000 Scale Revision Master Plan for Fair, Picnic, Entertainment, Park, Children's Garden and Play Space and Open Sport Facility; Mersin, Yenişehir District.

The Metropolitan Municipality of Mersin (MMM) (2018). The Feasibility Report and Model for Urban Regeneration and Development of Tevfik Sırrı Gür Stadium, Müftü Stream and Its Environment.

Tickamyer A.R. (2000). Space Matters! Spatial Inequality in Future Sociology. *Contemporary Sociology*, Vol. 29, No. 6 pp. 805-813

Tuan, Y. F. (2001). *Space and pace. The perspective of experience* (London 1977).

Untermann, R. (1984). Accomodating the Pedestrian. New York: Van Nostrand Reinhold.

Urry, J. (1985). Social relations, space and time. In *Social relations and spatial structures* (pp. 20-48). Palgrave, London.

Urry, J. (2011). Does Mobility Have a Future?. In *Mobilities: New Perspectives on Transport and Society*, ed. M. Grieco and J. Urry. Farnham: Ashgate, pp. 3-20

Van Herzele, A., & Wiedemann, T. (2003). A monitoring tool for the provision of accessible and attractive urban green spaces. *Landscape and urban planning*, *63*(2), 109-126.

Vanlı, Ş. (1977). *The Works of Şevki Vanlı-1*, Yaprak Kitabevi, Ankara.

Varna, G. (2014). *Measuring public space: the star model*. Ashgate, Farnham.

Vernez-Moudon, A. (Ed.). (1987). *Public Streets for Public Use*. New York: Van Nostrand Reinhold.

Victoria Transport Policy Institute (VTPI) (2011). Safety and health impacts. Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications. VTPI. [http://www.vtpi.org/tca/tca0503.pdf]

Wheeler, S. (2001) Livable Communities: Creating Safe and Livable Neighborhoods, Towns, and Regions in California. IURD *Working Paper Series.* https://escholarship.org/uc/item/8xf2d6jg#page-1, accessed 30 August 2011.

Whyte, W. (1980). *The Social Life of Small Urban Spaces*. Washington: The Conservation Foundation.

Whyte, W. H. (1988). *City: Rediscovering the Center*. New York: Doubleday.

Wooley, H. (2003). *Urban Open Spaces*. London: Taylor & Francis.

Wycherley, R. E. (1993). *[[How the Greeks built cities] türk.]; Antik çağda kentler nasıl kuruldu?*. Arkeoloji ve Sanat Yayınları.

Zucker, P. (1959). *Town and Square: From the Agora to the Village Green*. New York: Columbia University Press.

APPENDIX

Appendix-A / Short interview

*"Bu anket çalışması Orta Doğu Teknik Üniversitesi'nde Züleyha Sara BELGE tarafından yürütülmekte olan **"Kamusal Alanın Oluşumunda Hareket ve Yayanın Rolü"** başlıklı doktora tez çalışması ile ilgili olarak yapılmaktadır. Anket kapsamında vermiş olduğunuz cevaplar sadece akademik çalışmalar kapsamında kullanılacak olup, kesinlikle üçüncü şahıs ve kurumlarla paylaşılmayacaktır. Çalışmaya göstermiş olduğunuz destek, ayırdığınız zaman ve ilgi için teşekkür ederiz"*

Züleyha Sara BELGE

Mersin Üniversitesi
Mimarlık Fakültesi
Şehir ve Bölge Planlama Bölümü

Prof. Dr. Z. Müge AKKAR ERCAN
Tez Yöneticisi
Orta Doğu Teknik Üniversitesi
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Şehir ve Bölge Planlama Bölümü

Mersin kıyıbandını kullanırken sizi etkileyen etmenleri 1-5 arası puanlayınız.

en önemli etken 5 en az etkili etmen 1

		1	2	3	4	5
Rekreasyonel Faaliyetler, tesisler	– kapalı alan fitness tesisi, Park , Çocuk Parkı, Açık havuz, Plaj, Spor alanı, basketbol sahası, tenis kortu, Marina gibi tesislerin olması					
	– spor aletleri gibi ekipmanların olması					
Hizmetler ve Olanaklar	– tuvaletlerin, bankların, çardakların olması					
Erişilebilirlik	– farklı, alternatif ulaşım araçlarının olması					
	– yaya yolunun devamlılığı ve üzerinde engellerin olmaması					
	– yaya yolunun genişliği ve durumu					
	– bisiklet yolunun olması, devamlılığı ve üzerinde engellerin olmaması					
	– Park yerinin olması					
	– kentten sahil bandına yönelim					

	– Toplu taşımanın olması
Alanın çevresi	– arazi kullanımının karma olması (ticaret+konut+kamusal alanlar) ve çeşitliliği
	– Sahile yakın yerleşim alanı ile sahil bandının arasındaki bağlantı
Algılanan Güvenlik	– ışıklandırma
	– Güvende hissetme
Kültürel Özellikler	– Kişisel özellikleriniz ve burayı kullanan kişilerin özellikleri
Zaman	– Alanı zamana göre kullanma (mevsimlere, haftalara, günlere ve saatlere göre)
Estetik Kalite	– Alanda çekici özelliklerin olması (mimari tasarım, yapı çeşitliliği, peyzaj gibi)
	– Alanın estetik kalitesinin olması
Fiziksel Güvenlik	– Alanda karşıdan karşıya geçebilme, trafik düzenlemesi, trafik ışıkları
Bağlantılar	– farklı aktivitelerin devamlılığının olması
	– yürürken dinlenebilecek ya da ara verebilecek durakların olması
	– anlaşılır, devamlılığı olan yaya ve bisiklet yolları
Fiziksel Konfor	– Gölge alanların olması
	– Ağaçlar
	– İnsan ölçekli tasarım
	– topografya ve eğim

	– iklim faktörleri (güneş, rüzgar, yağmur vb.) – peyzaj ve manzara
Çekicilik	– kullanım çeşitliliğinin alanı çekici yapması – ışıklandırmanın alanı çekici yapması – yolların, ve alanın bakımlı ve düzgün olması

Appendix-B / Questionnaire Form

"Bu anket çalışması Mersin Üniversitesi, Mimarlık Fakültesi, Şehir ve Bölge Planlama Bölümü'nde Öğretim Görevlisi Züleyha Sara BELGE tarafından yürütülmekte olan ***" Kamusal Alanın Oluşumunda Hareket ve Yayanın Rolü, Mersin Kıyı Bandı Örnek Alan Çalışması"*** *başlıklı araştırma projesi kapsamında yapılmaktadır. Araştırma projesi TÜBİTAK (1002) tarafından desteklenmektedir. Anket kapsamında vermiş olduğunuz cevaplar sadece akademik çalışmalar kapsamında kullanılacak olup, kesinlikle üçüncü şahıs ve kurumlarla paylaşılmayacaktır. Çalışmaya göstermiş olduğunuz destek, ayırdığınız zaman ve ilgi için teşekkür ederiz"*

Anketin Yapılma Tarihi: **Anketin Yapılma Saati:** **Anketörün Adı Soyadı:**	**ANKET NO:**

ANKET YAPILAN BÖLGE

1.Bölge *(Mezitli Deresi - Mersin Üniversitesi Yenişehir Yerleşkesi Arası)*	**2.Bölge** *(Mersin Üniversitesi Yenişehir Yerleşkesi- Marina (Göçmen Kavşağı) Arası)*	**3.Bölge** *(Mersin Üniversitesi Yenişehir Yerleşkesi- Marina (Göçmen Kavşağı) Arası)*

A. KULLANICI PROFİLİNE İLİŞKİN SORULAR

1. Cinsiyet	*Erkek*	*Kadın*		
2. Yaş:	*16-34*	*35-59*	*60-üstü*	
3. Eğitim Durumunuz:				
Okula Gitmedim	*İlkokul*	*Ortaokul*	*Lise*	*Yüksek Öğrenim*

4. Meslek:

5a. Hane halkı sayısı:	**5b. Hanede çalışan kişi sayısı:**

6. Ortalama hane geliri (aylık toplam TL):

0-2000	*2001-4000*
4001-6000	*6000-üstü*

7. Mersin'de Nerede Yaşıyorsunuz? (Mahalle Bilgisi, varsa Site Bilgisi)

8a. Konut Türü:				**8b. Konut Sahipliği:**	
Güvenlikli Site	Bahçe	*Var*	*Yok*	Ev Sahibi	
	Havuz	*Var*	*Yok*		
Apartman Dairesi	Bahçe	*Var*	*Yok*	Kiracı	
	Havuz	*Var*	*Yok*		
Müstakil	Bahçe	*Var*	*Yok*	Diğer	
Diğer					

9a. Ne kadar süredir Mersin'de yaşıyorsunuz?	**9b. Mersin'e nereden geldiniz?**

B. MERSİN KIYI BANDININ KULLANIMINA İLİŞKİN SORULAR

10. Ne kadar sıklıkla Mersin Kıyı Bandına geliyorsunuz?

Ayda 1-2 kere	*Haftada 1-2 kere*	*Haftada 3-4 kere*	*Hafta içi her gün*	*Her hafta sonu*	*Her gün*

11. Mersin Kıyı Bandında ne kadar zaman geçiriyorsunuz?

1 Saatten Az	1-2 Saat	2-3 Saat	3 4- Saat	4 Saatten Fazla

12. Hangi ulaşım aracı ile geliyorsunuz?

*Özel Araç**	*Yürüyerek*	*Otobüsle / Minibüsle*	*Bisikletle*

***12a.** Özel araç ile geliyorsanız, aracınızı nereye park ediyorsunuz? Sizce araçlar için yeterince park yeri var mı?			
13. Kıyı bandına gelmeyi en çok tercih ettiğiniz zaman dilimleri nedir?			
a.Mevsim			
İlkbahar	*Yaz*	*Sonbahar*	*Kış*
b.Gün			
Haftaiçi	*Cumartesi*	*Pazar*	
c.Saat			
Sabah Erken	*Öğleden Önce*	*Öğlen Arası*	*Öğleden Sonra*	*Akşamüzeri*	*Akşam*
14 Genellikle Mersin Kıyı Bandını ne amaçla kullanıyorsunuz? *(en fazla 3 tane seçilecek, 1'den 3'e sıralama yapılacak)*			
Spor Yapmak	*Yürüyüş*	*Çocuk Parkı*	*Piknik*
Balık Tutmak	*Dinlenmek-Oturmak*	*Diğer*	
15.Kıyı Bandında Kullanmayı tercih ettiğiniz alanlar nereleridir? *(en fazla 3 tane seçilecek, 1'den 3'e sıralama yapılacak)*			
Banklar	*Masa ve Pergolalar*	*Çim-Ağaç-Gölge*	*Deniz kıyısı*
Yol kenarı	*Bisiklet Yolları*	*Yürüyüş Yolları*	*Meydanlar / Açık Alanlar*
Spor Alanları	*Kafeler*	*Diğer*	
16. Kıyı bandına kiminle geliyorsunuz?			
Aile	*Arkadaşlar*	*Akrabalar*	*Yalnız*

C. KAMUSAL ALAN DEĞERLENDİRMESİ	***Katılıyorum***	***Kısmen Katılıyorum***	***Katılmıyorum***	**Fikrim Yok**
17. Kıyı bandında yeterince bank ve dinlenme yeri bulunmaktadır.				
18. Kıyı bandında yer alan bankların yerleri iyi seçilmiştir.				
19. Kıyı bandında yer alan servisler (WC-su) yeterlidir				
20. Oturduğum Mahalle'deki açık yeşil alan ve kamusal alan yetersiz olduğu için kıyı bandını kullanmayı tercih ediyorum				
21. Kıyı bandındaki gece ışıklandırması yeterlidir				
22. Kıyı bandında yer alan bisiklet yolları yeterlidir.				
23. Kıyı bandına yaya olarak ulaşmak kolaydır				
24. Kıyı bandında yaya yolları yaşlılar, engelliler, çocuklar, bebekli				

ve küçük çocuklu ebeveynler için güvenlidir.				
25. Kıyı bandında engelli insanlar için yeterince düzenlemeler (rampalar, özel yer döşemeleri, vs) bulunmaktadır.				
26. Kıyı bandına toplu taşım araçları ile ulaşmak kolaydır.				
27. Kıyı bandına özel araç ile ulaşmak kolaydır.				
28. Kıyı bandına ulaşmak için Adnan Menderes Bulvarı üzerindeki yaya geçitleri kolayca ulaşılabilir yerlerdedir.				
29. Kıyı bandında kendimi güvende hissediyorum.				
30. Kıyı bandında yer alan yeme-içme olanakları yeterlidir.				
31. Kıyı bandı yeteri kadar gölgedir.				
32. Kıyı bandında denize erişebiliyorum.				
33. Kıyı bandını denize yakın olduğu için tercih ediyorum.				
34. Kıyı bandının verimli bir şekilde kullanıldığını düşünüyorum				

Appendix-C / Crosstabulations

Question 11. How much time do you spend in Mersin Coastal Band?

1	2	3	4	5
Less than 1 hour	1-2 hours	2-3 hours	3-4 hours	More than 4 hours

GENDER		11										Total
			0	1	1-2	2	2-3	2-4	3	4	5	
2 **female**	Count	18	2	45	4	498	4	2	401	64	80	1118
	% of Total	0,9%	0,1%	2,2%	0,2%	**24,8%**	0,2%	0,1%	**20,0%**	3,2%	4,0%	55,7%
1 **male**	Count	12	0	48	0	340	2	0	336	76	24	838
	% of Total	0,6%	0,0%	2,4%	0,0%	**16,9%**	0,1%	0,0%	**16,7%**	3,8%	1,2%	41,8%
Total	Count	30	2	93	4	854	6	2	763	142	110	2006
	% of Total	1,5%	0,1%	4,6%	0,2%	42,6%	0,3%	0,1%	38,0%	7,1%	5,5%	100,0%

AGE		11										Total
			0	1	1-2	2	2-3	2-4	3	4	5	
16-34	Count	14	2	27	2	302	2	2	283	42	28	704
	% of Total	0,7%	0,1%	1,3%	0,1%	**15,1%**	0,1%	0,1%	**14,1%**	2,1%	1,4%	35,1%
35-59	Count	8	0	50	2	404	2	0	270	58	42	836
	% of Total	0,4%	0,0%	2,5%	0,1%	**20,1%**	0,1%	0,0%	**13,5%**	2,9%	2,1%	41,7%
60+	Count	8	0	16	0	142	2	0	198	38	36	440
	% of Total	0,4%	0,0%	0,8%	0,0%	**7,1%**	0,1%	0,0%	**9,9%**	1,9%	1,8%	21,9%
Total	Count	30	2	93	4	854	6	2	763	142	110	2006
	% of Total	1,5%	0,1%	4,6%	0,2%	42,6%	0,3%	0,1%	38,0%	7,1%	5,5%	100,0%

Question 12. Which transportation vehicle do you come with?

1	2	3	4
Private Car	Walking	Public Transport	Cylcle

GENDER		12														Total
			1	1-2	1-2-3	1-2-3-4	1-2-4	1-3	1-3-4	2	2-3	2-3-4	2-4	3	3-4	4	
2 female	Count	16	136	36	6	0	0	12	2	380	178	20	72	198	4	58	1118
	% of Total	0,8 %	6,8 %	1,8 %	0,3 %	0,0 %	0,0 %	0,6 %	0,1 %	**18,9 %**	8,9 %	1,0 %	3,6 %	**9,9 %**	0,2 %	2,9 %	55,7 %
1 male	Count	2	98	30	6	2	2	4	0	324	92	10	60	176	8	24	838
	% of Total	0,1 %	4,9 %	1,5 %	0,3 %	0,1 %	0,1 %	0,2 %	0,0 %	**16,2 %**	4,6 %	0,5 %	3,0 %	**8,8 %**	0,4 %	1,2 %	41,8 %
Total	Count	18	244	68	12	2	2	16	2	714	276	30	134	392	12	84	2006
	% of Total	0,9 %	12,2 %	3,4 %	0,6 %	0,1 %	0,1 %	0,8 %	0,1 %	35,6 %	13,8 %	1,5 %	6,7 %	19,5 %	0,6 %	4,2 %	100,0%

AGE		12															Total
			1	1-2	1-2-3	1-2-3-4	1-2-4	1-3	1-3-4	2	2-3	2-3-4	2-4	3	3-4	4	
16-34	Count	6	46	4	8	0	0	8	0	224	120	14	42	188	12	32	704
	% of Total	0,3%	2,3%	0,2%	0,4%	0,0%	0,0%	0,4%	0,0%	11,2%	6,0%	0,7%	2,1%	9,4%	0,6%	1,6%	35,1%
35-59	Count	4	140	44	2	0	0	6	0	284	124	10	34	158	0	30	836
	% of Total	0,2%	7,0%	2,2%	0,1%	0,0%	0,0%	0,3%	0,0%	14,2%	6,2%	0,5%	1,7%	7,9%	0,0%	1,5%	41,7%
60+	Count	8	54	20	2	2	2	2	2	198	26	4	56	42	0	22	440
	% of Total	0,4%	2,7%	1,0%	0,1%	0,1%	0,1%	0,1%	0,1%	9,9%	1,3%	0,2%	2,8%	2,1%	0,0%	1,1%	21,9%
Total	Count	18	244	68	12	2	2	16	2	714	276	30	134	392	12	84	2006
	% of Total	0,9%	12,2%	3,4%	0,6%	0,1%	0,1%	0,8%	0,1%	35,6%	13,8%	1,5%	6,7%	19,5%	0,6%	4,2%	100,0%

Question 13b. What are your most preferred time periods to come to the coastline? GENDER / AGE

1	2	3
Weekday	Saturday	Sunday

e.Cinsiyet			13b							Total
				1	1-2	1-2-3	1-3	2	2-3	3	
1	2.Yaş	16-34	Count	0	0	2	0	0	0	0	2
			% of Total	0,0%	0,0%	0,2%	0,0%	0,0%	0,0%	0,0%	0,2%
			Count	74	8	106	8	14	66	16	300
			% of Total	8,8%	1,0%	12,6%	1,0%	1,7%	7,9%	1,9%	35,8%
		35-59	Count	116	4	44	2	12	116	44	340
			% of Total	13,8%	0,5%	5,3%	0,2%	1,4%	13,8%	5,3%	40,6%
		60+	Count	74	6	70	2	6	18	16	196
			% of Total	8,8%	0,7%	8,4%	0,2%	0,7%	2,1%	1,9%	23,4%
		Total	Count	264	18	222	12	32	200	76	838
			% of Total	31,5%	2,1%	26,5%	1,4%	3,8%	23,9%	9,1%	100,0%
			Count	2	2	8	0	2	6	0	20
			% of Total	0,2%	0,2%	0,7%	0,0%	0,2%	0,5%	0,0%	1,8%
	2.Yaş	16-34	Count	140	18	76	6	28	90	20	384
			% of Total	12,5%	1,6%	6,8%	0,5%	2,5%	8,1%	1,8%	34,3%
		35-59	Count	114	20	96	8	12	146	74	480
			% of Total	10,2%	1,8%	8,6%	0,7%	1,1%	13,1%	6,6%	42,9%
		60+	Count	118	8	68	2	6	20	10	234
			% of Total	10,6%	0,7%	6,1%	0,2%	0,5%	1,8%	0,9%	20,9%
		Total	Count	374	48	248	16	48	262	104	1118
			% of Total	33,5%	4,3%	22,2%	1,4%	4,3%	23,4%	9,3%	100,0%
2	2.Yaş	16-34	Count	8	0	2	0	0	0	0	2
			% of Total	1,0%	0,0%	0,2%	0,0%	0,0%	0,0%	0,0%	0,2%
			Count	116	4	44	2	12	116	44	340
			% of Total	13,8%	0,5%	5,3%	0,2%	1,4%	13,8%	5,3%	40,6%
		35-59	Count	74	6	70	2	6	18	16	196
			% of Total	8,8%	0,7%	8,4%	0,2%	0,7%	2,1%	1,9%	23,4%
		60+	Count	264	18	222	12	32	200	76	838
			% of Total	31,5%	2,1%	26,5%	1,4%	3,8%	23,9%	9,1%	100,0%
		Total	Count	2	2	8	0	2	6	0	20
			% of Total	0,2%	0,2%	0,7%	0,0%	0,2%	0,5%	0,0%	1,8%
	2.Yaş	16-34	Count	140	18	76	6	28	90	20	384
			% of Total	12,5%	1,6%	6,8%	0,5%	2,5%	8,1%	1,8%	34,3%
		35-59	Count	114	20	96	8	12	146	74	480
			% of Total	10,2%	1,8%	8,6%	0,7%	1,1%	13,1%	6,6%	42,9%
		60+	Count	118	8	68	2	6	20	10	234
			% of Total	10,6%	0,7%	6,1%	0,2%	0,5%	1,8%	0,9%	20,9%
		Total	Count	374	48	248	16	48	262	104	1118
			% of Total	33,5%	4,3%	22,2%	1,4%	4,3%	23,4%	9,3%	100,0%

Question 14 For what purpose do you usually use Mersin Coastal Band?
GENDER / AGE

1-Sports	2-Walking	3-Playground	4-Picnic
5-Fishing	6-Relax-Sit	7-Other	

2.Yaş * 14.1 Crosstabulation

e.Cinsiyet			14.1						
			1	2	3	4	5	6	7
1	2.Yaş	16-34	Count	0	0	0	0	0	2
			% of Total	0,0%	0,0%	0,0%	0,0%	0,0%	0,2%
		35-59	Count	44	144	8	22	6	60	16
			% of Total	5,3%	17,2%	1,0%	2,6%	0,7%	7,2%	1,9%
		60+	Count	122	104	28	34	10	34	8
			% of Total	14,6%	12,4%	3,3%	4,1%	1,2%	4,1%	1,0%
	Total		Count	110	50	6	8	4	12	6
			% of Total	13,1%	6,0%	0,7%	1,0%	0,5%	1,4%	0,7%
			Count	276	298	42	64	20	106	32
			% of Total	32,9%	35,6%	5,0%	7,6%	2,4%	12,6%	3,8%
2	2.Yaş	16-34	Count	4	6	0	4	2	0	4
			% of Total	0,4%	0,5%	0,0%	0,4%	0,2%	0,0%	0,4%
		35-59	Count	108	128	12	16	16	78	26
			% of Total	9,7%	11,4%	1,1%	1,4%	1,4%	7,0%	2,3%
		60+	Count	86	144	56	22	46	70	56
			% of Total	7,7%	12,9%	5,0%	2,0%	4,1%	6,3%	5,0%
	Total		Count	104	56	2	14	34	22	2
			% of Total	9,3%	5,0%	0,2%	1,3%	3,0%	2,0%	0,2%
			Count	302	334	70	56	98	170	88
			% of Total	27,0%	29,9%	6,3%	5,0%	8,8%	15,2%	7,9%

Question 15. What are the areas you prefer to use in the Coastal Band?
GENDER / AGE

1-Banks	2-Pergolas	3-Grass-Shadows	4-Seashore
5-Main Route	6-Cycle path	7-Walking path	8-Squares
9-Sport	10-Cafes	11-Other	

2.Yaş * 15.1 Crosstabulation

e.Cinsiyet			15.1											Total
				1	10	11	2	3	4	5	6	7	8	9	
1	2.Yaş	16-34	Count	0	0	0	0	0	2	0	0	0	0	0	2
			% of Total	0,0%	0,0%	0,0%	0,0%	0,0%	0,2%	0,0%	0,0%	0,0%	0,0%	0,0%	0,2%
		35-59	Count	26	10	12	30	22	94	10	6	58	4	28	300
			% of Total	3,1%	1,2%	1,4%	3,6%	2,6%	11,2%	1,2%	0,7%	6,9%	0,5%	3,3%	35,8%
		60+	Count	26	10	8	30	36	42	12	6	54	14	102	340
			% of Total	3,1%	1,2%	1,0%	3,6%	4,3%	5,0%	1,4%	0,7%	6,4%	1,7%	12,2%	40,6%
	Total		Count	10	2	6	20	18	22	2	2	30	0	84	196
			% of Total	1,2%	0,2%	0,7%	2,4%	2,1%	2,6%	0,2%	0,2%	3,6%	0,0%	10,0%	23,4%
			Count	62	22	26	80	76	160	24	14	142	18	214	838
			% of Total	7,4%	2,6%	3,1%	9,5%	9,1%	19,1%	2,9%	1,7%	16,9%	2,1%	25,5%	100,0%
2	2.Yaş	16-34	Count	2	2	4	0	4	8	0	0	0	0	0	20
			% of Total	0,2%	0,2%	0,4%	0,0%	0,4%	0,7%	0,0%	0,0%	0,0%	0,0%	0,0%	1,8%
		35-59	Count	42	16	28	42	24	74	10	20	40	0	80	384
			% of Total	3,8%	1,4%	2,5%	3,8%	2,1%	6,6%	0,9%	1,8%	3,6%	0,0%	7,2%	34,3%
		60+	Count	44	6	50	78	42	106	26	6	58	6	56	480
			% of Total	3,9%	0,5%	4,5%	7,0%	3,8%	9,5%	2,3%	0,5%	5,2%	0,5%	5,0%	42,9%
	Total		Count	6	4	0	24	6	44	8	6	34	4	98	234
			% of Total	0,5%	0,4%	0,0%	2,1%	0,5%	3,9%	0,7%	0,5%	3,0%	0,4%	8,8%	20,9%
			Count	94	28	82	144	76	232	44	32	132	10	234	1118
			% of Total	8,4%	2,5%	7,3%	12,9%	6,8%	20,8%	3,9%	2,9%	11,8%	0,9%	20,9%	100,0%
				10	2	1	0	0	8	0	0	0	0	0	2
				0,9%	0,2%	0,0%	0,0%	0,0%	0,7%	0,0%	0,0%	0,0%	0,0%	0,0%	0,2%

Question 17. There are enough benches and resting places on the coastline. GENDER / AGE

2.Yaş * 17 Crosstabulation

e.Cinsiyet				17			Total
				Agree	Partially Agree	Disagree	
1	2.Yaş	16-34	Count	2	0	0	2
			% of Total	0,2%	0,0%	0,0%	0,2%
			Count	146	118	36	300
			% of Total	17,4%	14,1%	4,3%	35,8%
		35-59	Count	186	136	18	340
			% of Total	22,2%	16,2%	2,1%	40,6%
		60+	Count	112	76	8	196
			% of Total	13,4%	9,1%	1,0%	23,4%
		Total	Count	446	330	62	838
			% of Total	53,2%	39,4%	7,4%	100,0%
2	2.Yaş	16-34	Count	14	0	6	20
			% of Total	1,3%	0,0%	0,5%	1,8%
			Count	178	166	40	384
			% of Total	15,9%	14,8%	3,6%	34,3%
		35-59	Count	250	200	30	480
			% of Total	22,4%	17,9%	2,7%	42,9%
		60+	Count	124	86	24	234
			% of Total	11,1%	7,7%	2,1%	20,9%
		Total	Count	566	452	100	1118
			% of Total	50,6%	40,4%	8,9%	100,0%

Question 19. Services on the coastline (WC-water) are sufficient. GENDER / AGE

2.Yaş * 19 Crosstabulation

e.Cinsiyet				19					Total
					No Idea	Agree	Partially Agree	Disagree	
1	2.Yaş	16-34	Count	0	0	0	0	2	2
			% of Total	0,0%	0,0%	0,0%	0,0%	0,2%	0,2%
			Count	1	11	18	86	184	300
			% of Total	0,1%	1,3%	2,1%	10,3%	22,0%	35,8%
		35-59	Count	0	0	24	112	204	340
			% of Total	0,0%	0,0%	2,9%	13,4%	24,3%	40,6%
		60+	Count	0	6	16	70	104	196
			% of Total	0,0%	0,7%	1,9%	8,4%	12,4%	23,4%
		Total	Count	1	17	58	268	494	838
			% of Total	0,1%	2,0%	6,9%	32,0%	58,9%	100,0%
2	2.Yaş	16-34	Count		0	2	10	8	20
			% of Total		0,0%	0,2%	0,9%	0,7%	1,8%
			Count		4	34	114	232	384
			% of Total		0,4%	3,0%	10,2%	20,8%	34,3%
		35-59	Count		2	30	198	250	480
			% of Total		0,2%	2,7%	17,7%	22,4%	42,9%
		60+	Count		2	18	80	134	234
			% of Total		0,2%	1,6%	7,2%	12,0%	20,9%
		Total	Count		8	84	402	624	1118
			% of Total		0,7%	7,5%	36,0%	55,8%	100,0%

Question 21. Night lighting on the coastal strip is sufficient GENDER / AGE

2.Yaş * 21 Crosstabulation

e.Cinsiyet				21				Total
				No Idea	Agree	Partially Agree	Disagree	
1	2.Yaş		Count	0	2	0	0	2
			% of Total	0,0%	0,2%	0,0%	0,0%	0,2%
		16-34	Count	4	202	62	32	300
			% of Total	0,5%	24,1%	7,4%	3,8%	35,8%
		35-59	Count	2	230	78	30	340
			% of Total	0,2%	27,4%	9,3%	3,6%	40,6%
		60+	Count	0	144	38	14	196
			% of Total	0,0%	17,2%	4,5%	1,7%	23,4%
		Total	Count	6	578	178	76	838
			% of Total	0,7%	69,0%	21,2%	9,1%	100,0%
2	2.Yaş		Count	0	16	2	2	20
			% of Total	0,0%	1,4%	0,2%	0,2%	1,8%
		16-34	Count	2	238	100	44	384
			% of Total	0,2%	21,3%	8,9%	3,9%	34,3%
		35-59	Count	4	324	108	44	480
			% of Total	0,4%	29,0%	9,7%	3,9%	42,9%
		60+	Count	0	170	56	8	234
			% of Total	0,0%	15,2%	5,0%	0,7%	20,9%
		Total	Count	6	748	266	98	1118
			% of Total	0,5%	66,9%	23,8%	8,8%	100,0%

Question 24. Pedestrian paths on the coastal strip are safe for the elderly, disabled, children, parents with infants and young children. GENDER / AGE

2.Yaş * 24 Crosstabulation

e.Cinsiyet				24				Total
				No Idea	Agree	Partially Agree	Disagree	
1	2.Yaş		Count	0	2	0	0	2
			% of Total	0,0%	0,2%	0,0%	0,0%	0,2%
		16-34	Count	2	106	132	60	300
			% of Total	0,2%	12,6%	15,8%	7,2%	35,8%
		35-59	Count	4	114	170	52	340
			% of Total	0,5%	13,6%	20,3%	6,2%	40,6%
		60+	Count	0	66	116	14	196
			% of Total	0,0%	7,9%	13,8%	1,7%	23,4%
		Total	Count	6	288	418	126	838
			% of Total	0,7%	34,4%	49,9%	15,0%	100,0%
2	2.Yaş		Count	0	12	4	4	20
			% of Total	0,0%	1,1%	0,4%	0,4%	1,8%
		16-34	Count	2	118	192	72	384
			% of Total	0,2%	10,6%	17,2%	6,4%	34,3%
		35-59	Count	2	174	240	64	480
			% of Total	0,2%	15,6%	21,5%	5,7%	42,9%
		60+	Count	0	72	108	54	234
			% of Total	0,0%	6,4%	9,7%	4,8%	20,9%
		Total	Count	4	376	544	194	1118
			% of Total	0,4%	33,6%	48,7%	17,4%	100,0%

Question 25. There are enough arrangements (ramps, special flooring, etc.) for people with disabilities in the coastline. GENDER / AGE

2.Yaş * 25 Crosstabulation

e.Cinsiyet				25				Total
				No Idea	Agree	Partially Agree	Disagree	
1	2.Yaş		Count	0	2	0	0	2
			% of Total	0,0%	0,2%	0,0%	0,0%	0,2%
		16-34	Count	8	94	112	86	300
			% of Total	1,0%	11,2%	13,4%	10,3%	35,8%
		35-59	Count	6	106	152	76	340
			% of Total	0,7%	12,6%	18,1%	9,1%	40,6%
		60+	Count	4	48	82	62	196
			% of Total	0,5%	5,7%	9,8%	7,4%	23,4%
	Total		Count	18	250	346	224	838
			% of Total	2,1%	29,8%	41,3%	26,7%	100,0%
2	2.Yaş		Count	0	8	8	4	20
			% of Total	0,0%	0,7%	0,7%	0,4%	1,8%
		16-34	Count	12	86	160	126	384
			% of Total	1,1%	7,7%	14,3%	11,3%	34,3%
		35-59	Count	24	152	170	134	480
			% of Total	2,1%	13,6%	15,2%	12,0%	42,9%
		60+	Count	6	64	96	68	234
			% of Total	0,5%	5,7%	8,6%	6,1%	20,9%
	Total		Count	42	310	434	332	1118
			% of Total	3,8%	27,7%	38,8%	29,7%	100,0%

Question 26. It is easy to reach the coastline by public transport. GENDER / AGE

2.Yaş * 26 Crosstabulation

e.Cinsiyet				26				Total
				No Idea	Agree	Partially Agree	Disagree	
1	2.Yaş		Count	0	2	0	0	2
			% of Total	0,0%	0,2%	0,0%	0,0%	0,2%
		16-34	Count	6	202	54	38	300
			% of Total	0,7%	24,1%	6,4%	4,5%	35,8%
		35-59	Count	36	206	60	38	340
			% of Total	4,3%	24,6%	7,2%	4,5%	40,6%
		60+	Count	10	120	38	28	196
			% of Total	1,2%	14,3%	4,5%	3,3%	23,4%
	Total		Count	52	530	152	104	838
			% of Total	6,2%	63,2%	18,1%	12,4%	100,0%
2	2.Yaş		Count	0	16	2	2	20
			% of Total	0,0%	1,4%	0,2%	0,2%	1,8%
		16-34	Count	8	188	114	74	384
			% of Total	0,7%	16,8%	10,2%	6,6%	34,3%
		35-59	Count	20	276	116	68	480
			% of Total	1,8%	24,7%	10,4%	6,1%	42,9%
		60+	Count	14	118	66	36	234
			% of Total	1,3%	10,6%	5,9%	3,2%	20,9%
	Total		Count	42	598	298	180	1118
			% of Total	3,8%	53,5%	26,7%	16,1%	100,0%

29. I feel safe on the coastline. GENDER / AGE

2.Yaş * 29 Crosstabulation

e.Cinsiyet				29					Total
					No Idea	Agree	Partially Agree	Disagree	
1	2.Yaş		Count	0	0	2	0	0	2
			% of Total	0,0%	0,0%	0,2%	0,0%	0,0%	0,2%
		16-34	Count	0	4	120	118	58	300
			% of Total	0,0%	0,5%	14,3%	14,1%	6,9%	35,8%
		35-59	Count	1	1	122	172	44	340
			% of Total	0,1%	0,1%	14,6%	20,5%	5,3%	40,6%
		60+	Count	0	0	80	100	16	196
			% of Total	0,0%	0,0%	9,5%	11,9%	1,9%	23,4%
	Total		Count	1	5	324	390	118	838
			% of Total	0,1%	0,6%	38,7%	46,5%	14,1%	100,0%
2	2.Yaş		Count			12	4	4	20
			% of Total			1,1%	0,4%	0,4%	1,8%
		16-34	Count			130	198	56	384
			% of Total			11,6%	17,7%	5,0%	34,3%
		35-59	Count			184	226	70	480
			% of Total			16,5%	20,2%	6,3%	42,9%
		60+	Count			72	130	32	234
			% of Total			6,4%	11,6%	2,9%	20,9%
	Total		Count			398	558	162	1118
			% of Total			35,6%	49,9%	14,5%	100,0%

Crosstabulations for GENDER (1-Male / 2-Female) and Sub-Zone (1-2-3)

Anket Bölge * 19 Crosstabulation

e.Cinsiyet				19					Total
					No Idea	Agree	Partially Agree	Disagree	
1	Anket Bölge	1	Count	0	6	24	90	168	288
			% of Total	0,0%	0,7%	2,9%	10,7%	20,0%	34,4%
		2	Count	0	4	18	124	182	328
			% of Total	0,0%	0,5%	2,1%	14,8%	21,7%	39,1%
		3	Count	1	7	16	54	144	222
			% of Total	0,1%	0,8%	1,9%	6,4%	17,2%	26,5%
	Total		Count	1	17	58	268	494	838
			% of Total	0,1%	2,0%	6,9%	32,0%	58,9%	100,0%
2	Anket Bölge	1	Count		0	28	146	234	408
			% of Total		0,0%	2,5%	13,1%	20,9%	36,5%
		2	Count		0	36	156	172	364
			% of Total		0,0%	3,2%	14,0%	15,4%	32,6%
		3	Count		8	20	100	218	346
			% of Total		0,7%	1,8%	8,9%	19,5%	30,9%
	Total		Count		8	84	402	624	1118
			% of Total		0,7%	7,5%	36,0%	55,8%	100,0%

Anket Bölge * 21 Crosstabulation

e.Cinsiyet				21				Total
				No Idea	Agree	Partially Agree	Disagree	
1	Anket Bölge	1	Count	2	204	64	18	288
			% of Total	0,2%	24,3%	7,6%	2,1%	34,4%
		2	Count	0	234	56	38	328
			% of Total	0,0%	27,9%	6,7%	4,5%	39,1%
		3	Count	4	140	58	20	222
			% of Total	0,5%	16,7%	6,9%	2,4%	26,5%
	Total		Count	6	578	178	76	838
			% of Total	0,7%	69,0%	21,2%	9,1%	100,0%
2	Anket Bölge	1	Count	0	270	106	32	408
			% of Total	0,0%	24,2%	9,5%	2,9%	36,5%
		2	Count	0	258	68	38	364
			% of Total	0,0%	23,1%	6,1%	3,4%	32,6%
		3	Count	6	220	92	28	346
			% of Total	0,5%	19,7%	8,2%	2,5%	30,9%
	Total		Count	6	748	266	98	1118
			% of Total	0,5%	66,9%	23,8%	8,8%	100,0%

Anket Bölge * 22 Crosstabulation

e.Cinsiyet				22				Total
				No Idea	Agree	Partially Agree	Disagree	
1	Anket Bölge	1	Count	4	206	56	22	288
			% of Total	0,5%	24,6%	6,7%	2,6%	34,4%
		2	Count	8	244	14	62	328
			% of Total	1,0%	29,1%	1,7%	7,4%	39,1%
		3	Count	8	112	60	42	222
			% of Total	1,0%	13,4%	7,2%	5,0%	26,5%
	Total		Count	20	562	130	126	838
			% of Total	2,4%	67,1%	15,5%	15,0%	100,0%
2	Anket Bölge	1	Count	12	266	106	24	408
			% of Total	1,1%	23,8%	9,5%	2,1%	36,5%
		2	Count	2	268	34	60	364
			% of Total	0,2%	24,0%	3,0%	5,4%	32,6%
		3	Count	24	154	84	84	346
			% of Total	2,1%	13,8%	7,5%	7,5%	30,9%
	Total		Count	38	688	224	168	1118
			% of Total	3,4%	61,5%	20,0%	15,0%	100,0%

Anket Bölge * 24 Crosstabulation

e.Cinsiyet				24				Total
				No Idea	Agree	Partially Agree	Disagree	
1	Anket Bölge	1	Count	6	120	122	40	288
			% of Total	0,7%	14,3%	14,6%	4,8%	34,4%
		2	Count	0	100	184	44	328
			% of Total	0,0%	11,9%	22,0%	5,3%	39,1%
		3	Count	0	68	112	42	222
			% of Total	0,0%	8,1%	13,4%	5,0%	26,5%
	Total		Count	6	288	418	126	838
			% of Total	0,7%	34,4%	49,9%	15,0%	100,0%
2	Anket Bölge	1	Count	2	162	174	70	408
			% of Total	0,2%	14,5%	15,6%	6,3%	36,5%
		2	Count	2	92	228	42	364
			% of Total	0,2%	8,2%	20,4%	3,8%	32,6%
		3	Count	0	122	142	82	346
			% of Total	0,0%	10,9%	12,7%	7,3%	30,9%
	Total		Count	4	376	544	194	1118
			% of Total	0,4%	33,6%	48,7%	17,4%	100,0%

Anket Bölge * 25 Crosstabulation

e.Cinsiyet				25				Total
				No Idea	Agree	Partially Agree	Disagree	
1	Anket Bölge	1	Count	14	114	106	54	288
			% of Total	1,7%	13,6%	12,6%	6,4%	34,4%
		2	Count	0	82	152	94	328
			% of Total	0,0%	9,8%	18,1%	11,2%	39,1%
		3	Count	4	54	88	76	222
			% of Total	0,5%	6,4%	10,5%	9,1%	26,5%
	Total		Count	18	250	346	224	838
			% of Total	2,1%	29,8%	41,3%	26,7%	100,0%
2	Anket Bölge	1	Count	28	152	128	100	408
			% of Total	2,5%	13,6%	11,4%	8,9%	36,5%
		2	Count	6	76	188	94	364
			% of Total	0,5%	6,8%	16,8%	8,4%	32,6%
		3	Count	8	82	118	138	346
			% of Total	0,7%	7,3%	10,6%	12,3%	30,9%
	Total		Count	42	310	434	332	1118
			% of Total	3,8%	27,7%	38,8%	29,7%	100,0%

Anket Bölge * 26 Crosstabulation

e.Cinsiyet				26				Total
				No Idea	Agree	Partially Agree	Disagree	
1	Anket Bölge	1	Count	4	224	44	16	288
			% of Total	0,5%	26,7%	5,3%	1,9%	34,4%
		2	Count	30	180	64	54	328
			% of Total	3,6%	21,5%	7,6%	6,4%	39,1%
		3	Count	18	126	44	34	222
			% of Total	2,1%	15,0%	5,3%	4,1%	26,5%
	Total		Count	52	530	152	104	838
			% of Total	6,2%	63,2%	18,1%	12,4%	100,0%
2	Anket Bölge	1	Count	4	266	102	36	408
			% of Total	0,4%	23,8%	9,1%	3,2%	36,5%
		2	Count	28	178	94	64	364
			% of Total	2,5%	15,9%	8,4%	5,7%	32,6%
		3	Count	10	154	102	80	346
			% of Total	0,9%	13,8%	9,1%	7,2%	30,9%
	Total		Count	42	598	298	180	1118
			% of Total	3,8%	53,5%	26,7%	16,1%	100,0%

Anket Bölge * 29 Crosstabulation

e.Cinsiyet				29					Total
					No Idea	Agree	Partially Agree	Disagree	
1	Anket Bölge	1	Count	1	1	130	110	46	288
			% of Total	0,1%	0,1%	15,5%	13,1%	5,5%	34,4%
		2	Count	0	0	98	188	42	328
			% of Total	0,0%	0,0%	11,7%	22,4%	5,0%	39,1%
		3	Count	0	4	96	92	30	222
			% of Total	0,0%	0,5%	11,5%	11,0%	3,6%	26,5%
	Total		Count	1	5	324	390	118	838
			% of Total	0,1%	0,6%	38,7%	46,5%	14,1%	100,0%
2	Anket Bölge	1	Count			182	166	60	408
			% of Total			16,3%	14,8%	5,4%	36,5%
		2	Count			100	226	38	364
			% of Total			8,9%	20,2%	3,4%	32,6%
		3	Count			116	166	64	346
			% of Total			10,4%	14,8%	5,7%	30,9%
	Total		Count			398	558	162	1118
			% of Total			35,6%	49,9%	14,5%	100,0%

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PUBLICATIONS

1. Akkar Ercan, M.; Belge, Z. Daha Yaşanabilir Kentler İçin Mikro Ölçek Bir Yürünebilirlik Modeli. MIDDLE EAST TECHNICAL UNIVERSITY, THE JOURNAL OF FACULTY OF ARCHITECTURE, 2016, 11, 1-35.
2. Belge, Z. Kentsel Dönüşüm Projelerinin Kent Hakkı Bağlamında Değerlendirilmesi: Dikmen Vadisi Örneği. TOPLUM VE DEMOKRASİ, 2018, 12, 19-35.

3. Belge, Z. Ütopya ve Distopya Örneklerinde İyi Mekân ve İdeal Toplum Değerlendirmesi ‘Hiçbir Yerden Haberler’ ve ‘Efendi Uyanıyor’. TOPLUM VE DEMOKRASİ, 2017, 11, 43-58.
4. Belge, Z. Sosyo Mekansallasmanin Ölçeksel Boyutu: Merkez Türkiye Projesi Örnegi. TOPLUM VE DEMOKRASİ, 2016, 22
5. Belge, Z. Mersin Tarihi Kent Merkezi’nde Kamusal Alanların Canlılığı Üzerine Bir Değerlendirme. ODA, 2015, 2015/7, 47-51.
6. Bilsel Cânâ, Bouché,P, Secci,C, Demir Mishchenko,E., Zorlu,F.,Belge, S.,Lebarbey,C, Rediscovering Mersin City Center: Walking as an Urban Design Strategy. "Rediscovering Mersin City Center by Walking: International Urban Design Workshop", 2016, 3-8.