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INTEGRATING USER NEEDS AND EXPECTATIONS INTO THE CONSERVATION PROCESS OF TRADITIONAL DWELLINGS: CASE OF MILAS, TÜRKIYE

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
OF
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BY

SERA NAZ ERSOY

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FOR
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IN
CONSERVATION OF CULTURAL HERITAGE IN ARCHITECTURE

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Approval of the thesis:

INTEGRATING USER NEEDS AND EXPECTATIONS INTO THE CONSERVATION PROCESS OF TRADITIONAL DWELLINGS: CASE OF MILAS, TÜRKIYE

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ABSTRACT

INTEGRATING USER NEEDS AND EXPECTATIONS INTO THE CONSERVATION PROCESS OF TRADITIONAL DWELLINGS: CASE OF MILAS, TÜRKIYE

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Master of Science, Conservation of Cultural Heritage in Architecture
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Structures live as long as they are used. For continuity in use, satisfaction of the users must be ensured, and their needs and expectations must be met. Notably, this concern is of greater importance for traditional dwellings since they harbor very particular type of human-environment interaction. Nevertheless, since the laws and regulations define the course of architectural conservation, the process becomes expert-based and top-down where actual users of the buildings are not involved. Howbeit, systematic and scientific work about how to manage a user-integrated conservation process remains insufficient in this context, especially in Türkiye. Accordingly, this study aspires to adopt a user-integrated perspective in conservation process of traditional dwellings in Milas, a historic urban site where traditional dwellings are still in use but confronted with the risk of abandonment. It aims to focus on the issue from sociological point of view and to set forth a systematic and scientific approach that would pay regard to the needs, expectations, and experiences of the users together with the architectural and heritage values of the structures. Within the framework of this research objective, the study will be composed of three stages:

pre-site literature survey, on-site research based on observations and interviews to examine the relationship between human and environment, and post-site analysis, evaluation, and preparation of proposals for user-integrated decision-making process in conservation.

Keywords: Conservation of cultural heritage, Vernacular architecture, Sustainable conservation, Collaborative conservation, Participatory conservation

ÖZ

KULLANICILARIN İHTİYAÇ VE BEKLENTİLERİNİ GELENEKSEL KONUTLARIN KORUNMA SÜRECİNE ENTEGRE ETMEK: MİLAS, TÜRKİYE

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Yapılar kullanıldıkları sürece yaşarlar. Kullanımda süreklilik için kullanıcıların memnuniyetinin sağlanması, ihtiyaç ve beklentilerinin karşılanması gerekmektedir. Bu endişe, insanın mekanla ilişkisinin en yoğun olduğu yapılar olan geleneksel konutlar için daha büyük önem taşımaktadır. Bu kapsamdaki yasa ve yönetmelikler nedeniyle, kültürel miras koruma süreci, binaların gerçek kullanıcılarının dahil olmadığı, uzmanlara dayalı ve yukarıdan aşağıya bir hal almaktadır. Buna rağmen, bütünleşik bir koruma sürecinin nasıl yönetileceğine dair sistematik ve bilimsel çalışmalar bu bağlamda özellikle Türkiye için yetersiz kalmaktadır. Bu çalışma, geleneksel konutların halen kullanımda ancak terk edilme tehlikesiyle karşı karşıya olduğu Milas bölgesindeki geleneksel konutların korunma sürecinde, geleneksel konut kullanıcılarını bütünleşik bir bakış açısı ile sürece dahil etmeyi amaçlamaktadır. Konuya sosyolojik bakış açısıyla odaklanarak, kullanıcıların ihtiyaç, beklenti ve deneyimleri ile yapıların değerlerini dikkate alan sistematik ve bilimsel bir yaklaşım ortaya koymak amaçlanmaktadır.

Anahtar Kelimeler: Kültürel mirasın korunması, Yerel mimari, Sürdürülebilir koruma, İşbirlikçi koruma, Katılımcı koruma

To my family

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CHAPTER 1

INTRODUCTION

It is a fact that the structures live as they are used. In this context, traditional dwellings are not just objects or physical artifacts, but living entities. They are the 'houses' that need to be addressed with their users and the lives in them. Although the professional point of view that sees them only as a source of information is ordinary, this point of view carries the danger of ignoring the integrated nature of traditional dwellings with anthropic factors. Nevertheless, it must be accepted that there are people living in traditional dwellings. With this presupposition, the work carried out can be continuous and sustainable.

In this study, traditional dwellings are discussed with all their values, as a coherent whole, and with a user-oriented approach that accepts their users who have been in the background or not even taken into account until today.

With the help of this integrating perspective, users of traditional dwellings can also participate in the conservation process of their houses. A conservation process that considers the needs and expectations of the users for spatial and thermal comfort in cooperation with the experts will be less conflicting, more successful, and sustainable.

Within the scope of this thesis, traditional residential urban fabric of Milas is studied. Although the reasons for choosing this site as the case will be discussed in detail in the following sections, it should be noted at this point that the main reason for the case selection is that there are users who still live and want to continue their lives in the traditional dwellings in this area and that these users have strong ties with the

place they live. In addition, due to the changing living conditions and the conservation status of the traditional dwellings they use, there is a need for the users to be included in the conservation process with a user-oriented approach.

1.1 Problem Definition

There are two fundamental conflicts that apply to traditional dwellings. Before all, these natural conflicts should be recognized, understood, and accepted. First of these is the conflict caused by the individual and societal status and values of these structures. On one hand, a traditional dwelling is a private property that is owned by its users as their private spheres. Users of traditional dwellings hold legal, physical, and emotional ownership of the buildings they live in. On the other hand, a traditional dwelling is also a common property that is recognized as cultural heritage regarding its features and values. It is owned and claimed for its preservation and social benefits. Within this framework, traditional dwellings are in a bipolar area of responsibility of different stakeholders due to their binary states as being both private and common properties. Therefore, these structures are subject to continuous conflict of interests. Eventually, this dual ownership creates a natural ambivalence, hence a natural conflict. In this setting, primarily, the problem faced by this building stock must be understood and accepted.

The second conflict of traditional dwellings is due to time and change. In other words, it is the tension caused by the 'unchangeability' of the traditional dwellings, as subjects of conservation, in the face of changing needs and expectations over time. To clarify, the features of traditional dwellings bear the traces of the past and reflect the period in which they were created. They were shaped according to the conditions and needs of that period, which are different from todays. It is a fact that systems of the past cannot cope with today's conditions. In this context, it should be understood and accepted that while modernization, globalization and changing life standards and needs are the reality, the users of traditional dwellings are confronted with a situation of 'living with the systems of the past'.

These two fundamental and natural conflicts of traditional dwellings can only be resolved with adopting an approach for understanding them and establishing mutual dialogue among stakeholders. Under the circumstances, a perspective that tries to minimize contradictions, and provides the grounds for conscious compromises and spatial adaptations are both necessary and inevitable.

In the contrary cases, where dialogues cannot be established between stakeholders, deeper problems arise within and among parties. These problems include (i) loss of the users' sense of belonging due to the decrease in the quality of life and satisfaction levels as a result of restrictions for interventions to the structures, (ii) exposure of buildings to interventions that disrupt their structure or authenticity, (iii) abandonment of the buildings by their users as a result of their inability to keep up with the changes.

Overall, the starting point of this thesis is constituted by these problems that are experienced in situations where the needs and expectations of traditional dwelling users are disregarded, and specialists or authorities cannot make conscious and sensitive adaptation suggestions.

1.2 Aim and Scope

Problems experienced by the users of traditional dwellings can be averted through a systematic and scientific approach that ensure deeper understanding of users' relation with their dwellings. This significant relationship between human and environment should be analyzed from different perspectives through integrating different disciplines, establishing mutual dialogue, and developing case-specific solutions. Successful and sustainable conservation decisions that ensure both physical and social continuity can be achieved through adoption of integrated and participatory approaches in conservation, involvement of users and identification of causes and values specific to each case. As a matter of fact, these approaches bring the user factor to the fore. In this way, they lay the groundwork for presenting an

approach proposal that considers the buildings holistically with all their tangible and intangible features and enables mutual dialogue among stakeholders. In this context, users must participate in the conservation process of the traditional dwellings they live in. Understanding the expectations, needs and values of the users will allow making more accurate and long-lasting decisions and interventions in conservation of cultural heritage.

In general terms, this study is within the scope of participatory approaches in conservation of cultural heritage, and it is substantially based on understanding and involving the user in every step of a conservation process. It seeks to find out what the conservation specialists can learn from the users (i.e., what information they can get from them and how can they use this information) and to emphasize the social aspect of conservation by addressing the issue from a sociological point of view. Moreover, it is for understanding and integrating the needs, expectations, and opinions of the users about their dwellings through adoption of a user-integrated perspective. Specifically, in the conservation process of traditional dwellings in the traditional residential urban fabric of Milas. The study aims to set forth a systematic approach proposal that would pay regard to the needs, expectations, and opinions of the users with respect to the architectural and heritage values of the structures in a living yet endangered traditional residential fabric.

Regarding the works in this field, this insight on user expectations and opinions is very significant since it carries more profound acquisitions within. In that sense, it is possible to state that there are also interrelating aims and benefits of this study. To elaborate, user-integrated perspective will emphasize the consideration of intangible components during the conservation of tangible cultural heritage and would eventually provide a holistic approach proposal that will reinforce the knowledge and experience of conservation experts with user opinions while determining the interventions to be made in order to ensure continuity of use for the traditional dwellings.

It is anticipated this approach would bridge over and assist minimizing the effects of potential conflicts that may arise when users' existing life conditions and expectations are faced with conservation priorities and principles. Additionally, inclusion of users will ensure physical and social continuity and eventually pave the way for sustainability in conservation of cultural heritage. Overall, long-term success in the interventions will improve the perspective towards conservation of cultural heritage and encourage further holistic approach and implementations.

In line with its aim, the study will be following certain questions:

- How can we understand the users' needs, expectations, and opinions regarding their dwellings?
- How do the users of traditional residential buildings use their dwellings (spaces and architectural elements within them)?
- How do the users relate with their dwellings? Which meanings or values do they attach to them?
- Are they satisfied with the current conditions of their dwellings? What do they find problematic? What do they expect from them?
- How can we use this data as design input in conservation process of traditional dwellings?
- How do the traditional dwelling users in Milas relate with their houses, what are their needs and expectations? How can we integrate them into the conservation process of their dwellings? What can we learn from this case?

1.3 Methodology

This study was accomplished in three stages: pre-site survey, on site research and post-site analysis and evaluation. In the first stage, literature and archival surveys were conducted. Collected data in this stage constituted the base for the study and formed the following parts. To elaborate, literature survey part of this stage consists of two sub-groups. First set of topics support the theoretical background of the study

and it is composed of the relationship between environment-user, culture, heritage, and space (with special focus on the historic city centers and traditional residential buildings), user-integrated approach in conservation, topics for investigation of user satisfaction, expectations and opinions, and participatory methods in conservation. Other set of topics provide information about the features of the site and include geographical, historical, physical (i.e. features of the built environment with focus on the spatial configuration of the traditional residential buildings etc.) and social (historical, demographic, socio-economic and socio-cultural features etc.) contexts of Milas and the study area. Furthermore, the archival survey was conducted in order to collect visuals (i.e. maps, aerial photos, photos etc.), and documents related with the conservation and planning history of the site. In the light of this data, materials for the field research such as research sheets, checklists, interview questions and questionnaires were prepared.

Second stage was composed of site research, which was completed with three trips to the study area (August 2020, September 2021 and May 2022). With the help of the interviews and on-site observations, the study area was examined and documented regarding its physical and social contexts and features. It should be noted that regarding the aim and scope of this thesis, information on the physical context were mostly provided from the previously conducted field research. Nevertheless, by all manner of means, the physical features of the studied traditional dwellings were examined and documented through following a pre-prepared checklist to identify their spatial configuration and main characteristics.

Third stage covers the analysis and evaluation of the findings from the previous stages. Before all, data gathered on site was organized and the results were analyzed. Then, findings from the analyses and data from the first stage was combined and evaluated to draw certain conclusions for the proposal. Last, proposals for the user-integrated approach for the conservation of the traditional residential fabric in Milas was delivered. Overall, thematic analysis was used for this study.

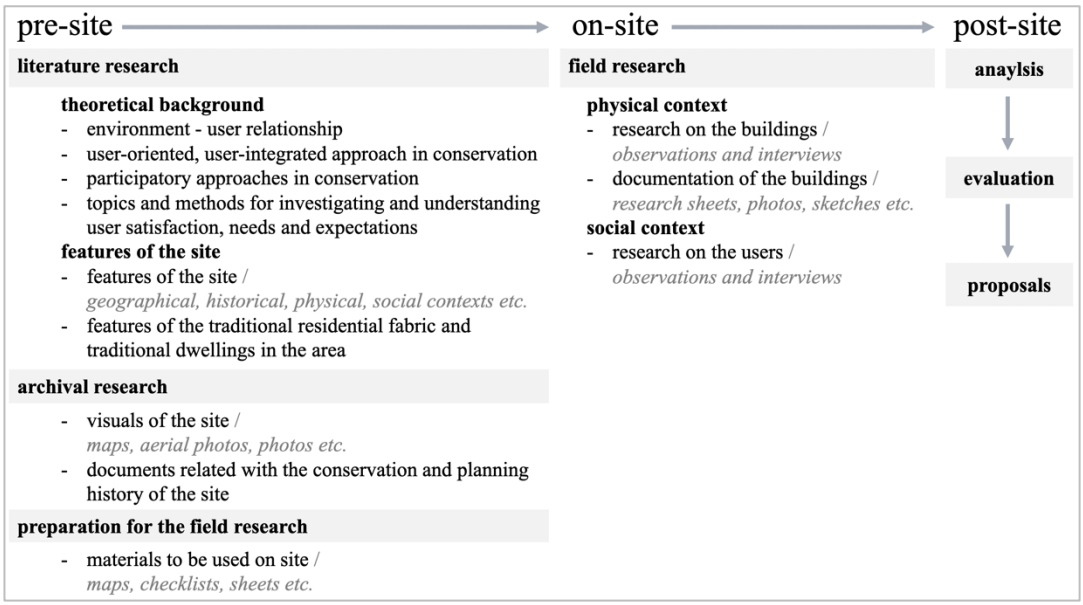

Figure 1 Methodology - Stages of the Study

As the focus of this study is the site research and interviews, it is worth enlarging upon their properties as much as possible. Before all, it should be noted that the necessary permissions were obtained from the users for entering and documenting their houses and using the data they shared within the scope of this research. However, the locations of the studied houses and the names of the users were kept confidential so as not to violate anyone's privacy.

Studied houses and their users were chosen through purposive sampling which is commonly used in field-oriented research. It is a type of nonprobabilistic sample that is used in research that does not seek for statistical generalizability. For this type of sampling, participants are selected regarding criteria that are in accordance with the research objective (Guest et al., 2006). Accordingly, current users of traditional residential buildings within the study area were interviewed. Preferably, the interviews were conducted with the user who spends their time most in the house, but the questions were concerning the entire household. In other words, information received from a single respondent was prevailing for that household.

Sample size for the research was determined according to data saturation. To elaborate, data saturation refers to 'the point in data collection and analysis when new information produces little or no change to the codebook' and when there are 'no practical guidelines for estimating sample sizes for purposively sampled interviews' (Guest et al., 2006). Accordingly, the initial analysis sample was determined prior to field research (depending on the information gathered from the literature survey on the features of the site and the preliminary trip to the study area) and the stopping criterion was decided on site.

Two different research sheets were used for this study. First one was for the physical features of the houses which was mostly based on observations. With the help of this sheet, the studied houses were examined in terms of:

- location of the buildings on the lot,
- number of floors,
- façade organization,
- building function (original and current),
- construction material and technique,
- plan schemes,
- traditional architectural elements (original and current function, use status).

Second sheet was for the social features, which was for the interviews with the users. To elaborate, interviews were conducted face-to-face and composed of mostly open-ended questions (which were categorized in the final stage). Also, they were semi-structured meaning that they were based on a format with pre-prepared questions. Depending on the respondents' willingness to answer, related questions were added when unforeseen responses were received during the interviews. Within the scope of each interview, there were questions to investigate both the physical and social features in building and settlement scales which are briefly as follows:

- demographic data (sex, age, occupation, hometown),
- building use and ownership (building age, ownership status, duration of inhabitance, frequency of use, number of users),

- spatial and thermal comfort conditions in building scale (heating method, cooling method, less comfortable season, ventilation, lighting, number of spaces, problems related with interior air quality, made interventions, desired interventions, most valuable feature, most problematic feature),
- spatial comfort conditions in neighborhood scale (security, neighborly relations, public services and social reinforcements, maintenance, tourism, most valuable feature, most problematic feature),
- sense of belonging and willingness to conserve (sense of belonging, contentedness with living here, opinion on the value of the house, opinion on conservation, responsibility for conservation, willingness to participate, willingness to pay),
- user needs and expectations (ability to meet the needs in building and settlement scales, further comments, recommendations and solutions for the needs and expectations).

Moreover, within the scope of interviews, there were topics on which additional information were gathered on site which are as follows:

- use of the environment (mostly used spaces regarding different periods of the day and year, use patterns),
- socio-cultural and socio-economic features (customs and traditions, modes of production),
- opinions of younger generation users (willingness to move back, restrictions affecting their decisions on the matter).

Each abovementioned subject was examined for understanding the environment and user from the viewpoint of a researcher. Accordingly, the issues were categorized in terms of the ways through which the gathered data can be organized and used in the conservation process regarding the main phases such as ‘understanding’, ‘evaluating, and ‘decision-making’. Thus, these methods provided the grounds for conducting and developing systematic research and proposals.

Table 1 Methodology - Data from the Field Research

Scale	Data from the research on	
	Physical Context - *Buildings*	**Social Context - *Users***
Building	- **location of the buildings on the lot,** - **number of floors,** - **façade organization,** - **building function** (original and current), - **construction material and technique,** - **plan schemes,** - **traditional architectural elements** (original and current function, use status).	- **demographic data** (sex, age, occupation, hometown), - **building use and ownership** (building age, ownership status, duration of inhabitance, frequency of use, number of users), - **spatial and thermal comfort conditions in building scale** (heating method, cooling method, less comfortable season, ventilation, lighting, number of spaces, problems related with interior air quality, made interventions, desired interventions, most valuable feature, most problematic feature), - **use of the environment** (mostly used spaces regarding different periods of the day and year, use patterns), - **socio-cultural and socio-economic features** (customs and traditions, modes of production), - **sense of belonging and willingness to conserve** (sense of belonging, contentedness with living here, opinion on the value of the house, opinion on conservation, responsibility for conservation, willingness to participate, willingness to pay), - **user needs and expectations** (ability to meet the needs in building and settlement scales, further comments, recommendations and solutions for the needs and expectations).
Settlement	- **features of the settlement** (geographical, historical, physical, social contexts) - **traditional dwellings** (features, typologies, characteristics of the traditional residential tissue)	- **spatial comfort conditions in neighborhood scale** (security, neighborly relations, public services and social reinforcements, maintenance, tourism, most valuable feature, most problematic feature), - **use of the environment** (mostly used spaces regarding different periods of the day and year, use patterns), - **socio-cultural and socio-economic features** (customs and traditions, modes of production), - **sense of belonging and willingness to conserve** (sense of belonging, contentedness with living here, opinion on the value of the house, opinion on conservation, responsibility for conservation, willingness to participate, willingness to pay), - **user needs and expectations** (ability to meet the needs in building and settlement scales, further comments, recommendations and solutions for the needs and expectations).

CHAPTER 2

RE-EVALUATING THE RELATIONSHIP BETWEEN TRADITIONAL DWELLINGS AND THEIR USERS IN THE CONTEXT OF COMMUNITY INVOLVEMENT AND USER PARTICIPATION

2.1 Traditional Dwelling as Private and Common Property in Tandem

House, as a type of building, emerged to protect people, to meet their needs and to create environment that will develop a sense of home, and it has been the foremost interest for every society throughout the history of architecture (Usta, 2020). The concept of 'house' is essentially based on shelter, protection from external factors. As from the provision of security and thermal shelter, life begins in the house and the house takes shape according to the way of living (Şimşek, 2014). Thus, houses are places that not only meet the need for shelter, but also ensure that individuals' different socio-cultural values are compatible with the environment. From this point of view, houses can be seen not only as a physical object where human needs are met, but also as a social and cultural accumulation in which identities of the people living in that place are found (Dönmez et al., 2015).

Concordantly, a house can be considered as a reference point, a personal territory, and a private zone for its users where they feel the need to express themselves by decorating, changing, adapting, and adopting. Every house, whether it is a traditional dwelling or not, is a private sphere for its users and the users cultivate physical, psychological, and social bonds with their private spheres. In other respects, users

possess legal rights on the houses they live in. In this context, it is important to understand the basic motives that the users build up with their houses.

When proceeded in the case of traditional dwellings, there is another prominent feature in addition to their individual status, which is their societal status. As a type of residential space, traditional dwellings are accepted as cultural heritage to be conserved and transferred to the future generations. Thus, they can be regarded as the properties of common interest and therefore, they are subject to special rules and regulations. Nevertheless, the legal framework and the restrictions for the traditional dwellings appear sharper when compared to the other types of housing. For this reason, it is more likely that the users' approach and feelings towards conservation of their private property are reactional. To achieve a successful and sustainable conservation process, it is vital for the experts to be aware of these human motives and anthropic factors in traditional dwellings.

2.2 Understanding Traditional Dwellings within the Context of Environmental and Conservation Studies

Integrated view to the study of housing and the user-oriented perspective was introduced through the environmental studies. Accordingly, various disciplines and stakeholders related with the built environment started to work in an interdisciplinary way, with an integrated approach on the matter. These studies were originated in traditional dwellings and concerned about the 'user' parameter with a special focus on the psychological, social, and cultural dimensions of the residential spaces.

In the grand scheme of the developments, with the increasing interest on the subject, studies in the field of conservation have also been shaped in this direction. As the environmental studies were mainly consisted of 'explanatory theories' concentrating on understanding the situation, conservation studies came to the fore with the regulation and organization of the approaches for the sustainable conservation of traditional dwellings.

2.2.1 Recognition of the 'User' in Traditional Dwellings: Environmental Studies

When the history of studies on the formation of housing is examined, it is possible to see that the studies on the influence of socio-cultural factors came to the fore in the environmental studies since the second half of the 20th century with the examination of traditional dwellings. Until then, the human-environment relationship and the need for shelter was generally accepted and explained through basic physical needs, and architecture was deemed obliged to respond to these objective needs (Ersoy, 2010). In this context, studies on the interpretation of the traditional houses were limited and 'dominated by the processual paradigm with archaeological surveying', yet this tendency was challenged with the influence of the international 'cultural turn' trend and the growing concern on the issue (Plimpton, 1994).

By the 1960s, the modern understanding of space was questioned, needs of the user -beyond their physical needs- were discussed, the overly perceptive authoritarian decision mechanisms were criticized, and 'culture' was included in architectural discourses to be examined in a deeper sense. The perspective on culture-space relations eventually came through the studies on vernacular architecture, which had been excluded until that period. With an approach from a different standpoint, Rapoport revealed the social and cultural meanings of domestic use of space through local architecture in his book 'House Form and Culture' from 1969. This radical study revealed cultural determinism against geographical, physical, and technical determinism, and most importantly proposed a thesis supported by the 'explanatory theories' of behavioral sciences. In fact, it broadened the horizon for the environmental studies, including architecture, and rang up the curtain for the design/decision processes grounded on the human-based understanding of space and user requirements (Ersoy, 2010).

Followed by this in-depth explanation, several books have been published on understanding the local built environment through the influence of culture.[1] Eventually, with the global inclination towards Sustainable Development in the 1980s, the significance of sociocultural contextual interpretation of the architecture, particularly the vernacular residences, was intensified. Coinciding values of sustainability and the 'cultural turn' met on common ground on the idea that 'human habitation embedded in a system of interlocked spaces (physical, temporal, social and conceptual)' (Allen, 1993).

Then on, not only cultural identities and habits, but also other human mechanisms such as psychic, cognitive, political/ideological, economic etc. are studied, and many fields from philosophy to economics formed a multidisciplinary structure with their own theories and tools. To elaborate, the discourses and studies which focus on socio-cultural factors that affect the housing formation appeared in different ways in different studies:[2]

- Cultural values and choices (Rapoport 1969a, 1969b, 1985a)
- Rules, norms, and social relations (Mazumdar & Mazumdar, 1984)
- Symbolic meanings (Bourdieu, 1973; Cunningham, 1972; Errington, 1979; Lawrence, 1985; Low, 1988; Rapoport, 1969a)
- Gender (Donley-Reid, 1982, 1990; Duncan, 1981; Khatib-Chahidi, 1981; Pellow, 1988)
- Religious beliefs (Eliade, 1959, 1985; Hardie, 1985; Pavlides & Hesser, 1989; Raglan, 1964; Saile, 1985; Sopher, 1967; Tuan, 1974)

[1] 'e.g., Bourdier and Alsayyad (1989); Duncan (1982); Glassie (1975); Oliver (1969, 1987); Seainon and Mugerauer (1985); Turan (1990)' (Chen et al., 2021).
[2] Sources used as a base for categoraization: (Erdoğan, 2017), (Atik & Erdoğan, 2007), (Öymen Gür, 2000).

Therefore, culture-based approaches constitute only the beginning of the process by revealing the socio-cultural dimensions of the user's relations with the space. Afterwards, they became almost a sub-part of the expanding knowledge and field of action with different theories and discourses (Ersoy, 2010).

On a final note, it is possible to say that the environmental studies usually consist of 'explanatory theories' where the focus is mainly understanding the situations. However, it was conservation studies that regulated and organized these approaches to ensure sustainable conservation of traditional dwellings.

2.2.2 Recognition of Traditional Dwellings as 'Cultural Heritage' in Conservation Studies

Culture is the 'accumulation of material and moral values of societies throughout the historical process' and it 'reflects the knowledge, experience, history, lifestyle and identity of a society' (Dikmen, 2014), and built or architectural heritage has an important role in transferring culture for future generations (Günçe & Mısırlısoy, 2019). They are regarded as cultural icons (Bullen & Love, 2011) and their conservation present visible evidence of the past culture that can promote cultural identity and collective memory (Tiesdell et al., 1996), affect community well-being and sense of place (Bullen & Love, 2011), and by this means provide a sense of sociocultural continuity. With this awareness, as from 1970s, there has been an ever-expanding interest in the preservation of historical buildings for aesthetic value and heritage conservation matters (Chiu, 2004).

After all, conservation of cultural heritage is deemed necessary since it ensures cultural continuity, maintains local identity, preserves distinctness and diversity, and creates habitable places (Beatley & Manning, 1997; Nasser, 2003; du Cros, 2001). Traditional dwelling, as an indispensable part of vernacular architecture that carries the traces of the identity, culture, and lifestyle of their users, incorporates all these necessities. Thereby, it is very important to conserve traditional dwellings for they

constitute great parts of our daily lives and embody both tangible and intangible heritage values as a coherent whole.

After all, conservation of traditional dwellings and their fabric is the outcome of a process that has been formed through discussions and decisions made in different platforms over the years. With the Venice Charter, the previous conservation approach that was focused on the conservation of monumental architecture has included the rural and urban settings of the historic monuments in its scope, which 'apply to not only to great works of art but also to more modest works of the past which have acquired cultural significance with the passing of time' (ICOMOS, 1964). Although this statement presented in the Venice Charter remained rather indefinite about the conservation status of traditional dwellings, it was a significant step in the field.

In the grand scheme of developments, acknowledgment of traditional residential buildings as cultural heritage dates to a relatively late period. Internationally and explicitly, it was brought to agenda in 1975 during the 'Congress on the European Architectural Heritage' in Amsterdam. Also, the Declaration of Amsterdam presented an approach on ensuring cultural continuity through pointing out that the designs and applications should 'ensure that, where possible, (they do) not necessitate a major change in the social composition of the residents' (Council of Europe, 1975).

Eventually, in the Washington Charter, the necessity of conserving the historic towns was pointed out with an emphasis on the improvement of housing in the subject areas (ICOMOS, 1987). After this great step, conservation of historic houses and their settings was progressed. Recently, in the Valetta Principles, it was stated that 'safeguarding of historic towns and urban areas, and their surroundings, includes the necessary procedures for their protection, conservation, enhancement and management as well as for their coherent development and their harmonious adaptation to contemporary life' and the idea of protecting housing from gentrification and deterioration was underlined (ICOMOS, 2011).

Just about the same period, Türkiye has also adopted a similar attitude toward this issue (Asatekin, 2004). First law of the Republican Period concerning the antiquities was enacted on April 25, 1973 (law numbered 1710). Within the scope of this law, antiquities were identified under Article 1 as 'above ground, underground or underwater structures; movable or immovable goods; and any documents of the same quality that belong to the prehistoric or historic times'[3], including residential structures like mansions and private structures of any kind (Eski Eserler Kanunu, 1973). Most prominently, during the 'Congress on the Conservation of Cultural and Natural Heritage' organized by the Ministry of Culture in 1990, importance of conserving traditional residential buildings was highlighted with reference to their moral, use and rarity values (Kültür Bakanlığı, 1990).

2.2.3 Conservation of Traditional Dwellings from the Perspective of Socio-Cultural Continuity and Sustainability

Numerous scholars and researchers have proposed that the physical form is closely linked with the sociocultural context. Although they have adopted differing approaches with differing interests, they have found a common ground on the idea of 'vitality of vernacular traditions and its corresponding core forms' and 'its continuity acts as a dynamic mechanism in creating sustainable spatial and physical forms, in which people can express their identity' (Chen et al., 2021).

Today, the role of architectural conservation gets beyond preservation and plays an important part in sustainability since architectural heritage offers economic, cultural, and social benefits to people (Bullen & Love, 2011). Sustainability, as one of the

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[3] *'Tarihten önceki devirlerle tarihî devirlere aidolup, bilim, kültür, din veya güzel sanatlarla ilgili bulunan, yer üstünde, yeraltında veya su içindeki (bütün yapılara, taşınır ve taşınmaz mallara ve aynî nitelikteki her türlü belgeye eski eser denir'* (translated by the author).

recent much-discussed issues, contains various aspects within itself and it aims to ensure the continuity of societies and the transfer of current resources to the future (Günçe & Mısırlısoy, 2019). Hence, 'the conservation and transmission of cultural heritage and cultural values to future generations is a social duty' (Dikmen, 2014). In that sense, conservation of vernacular architecture, which has a very important place in terms of socio-cultural continuity, is crucial for ensuring sustainability (Erarslan, 2018).

As a substantial component of vernacular architecture, traditional dwellings reflect both social and physical values of the past. While they set examples of the past architectural and construction techniques, they also shed light on the previous lifestyles and keep alive the practices of the culture that formed it (Erarslan, 2018). In that sense, it is possible to say that they contain and present both tangible and intangible values under the same roof. To elaborate, physical form of housing is the indicator of inhabitants' ways of adapting to the environment. The interior design is the representation of the sociocultural values, customs and practices, and the exterior form and structure are the reflection of the climatic conditions, aesthetic preferences, construction capabilities and building resource availabilities. Changes in the housing form display the evolution of this process regarding time and technological advancement. Briefly, housing forms of different periods set out the 'changes of a culture and the cultural identity of a place' while reflecting both the aesthetic and artistic aspects of culture, and the lifestyles of a people (Chiu, 2004). Therefore, the physical form of housing mirrors diverse human-environment relationships and it is 'not only a reflection of but also a component of culture itself' (Chiu, 2004), and their conservation is crucial for sociocultural continuity (Günçe and Mısırlısoy, 2019).

Based on their integrated nature and the prevalent conservation approach focusing on ensuring sustainability, traditional dwellings, which are dynamic by nature and have relationship with people in the forefront, should be safeguarded in their original functions and in accordance with the conditions of the day.

Achieving sustainability in conservation is reliant on adopting a holistic approach, which accepts tangible and intangible values as a whole and takes both physical and social aspects of conservation into consideration (Öksüz Kuşçuoğlu & Taş, 2017). In line with this objective, the use of traditional structures by their users is very important in terms of ensuring the continuity and sustainability of the socio-cultural structure and conservation of the architectural texture. With the increase of cultural awareness, many historic city centers and traditional dwellings in these places are taken into the scope of conservation and re-evaluated according to today's living conditions (Dalkılıç, 2008).

2.3 Problem of Continuity and Sustainability in Conservation of Traditional Dwellings

It is a fact that traditional dwellings, which have historical, cultural, and structural value, are getting worn out and disappearing day by day due to various reasons. However, the traditional structures that have survived to the present day and constitute our architectural heritage should be conserved and transferred to the future. With this purpose in mind, it is necessary to recognize and reveal the causes of wear and tear (Perker & Akıncıtürk, 2011).

One of the fundamental reasons for this wear and tear is the delay in considering and conserving traditional dwelling and its fabric as cultural heritage. Since the conservation of monumental structures was more prevalent, the conservation of civil architecture examples, which are the local sources of information, was put into the background (Erarslan, 2018). Due to this tendency and the delay in recognition and conservation of traditional houses as cultural heritage, most of the traditional dwellings have disappeared or are on the verge of extinction because of abandonment and dilapidation. Therefore, they had to be taken under protection, albeit late.

Particularly, traditional dwellings and the historical fabric they compose are exposed to striking changes due to their socio-cultural characteristics and the length of the

period they witness. They are constantly undergoing environmental, physical, social, and economic changes in the life dynamics of the place in which they are located (Yaygel, 2007). Globalization, urbanization, population growth, changes in the social structure and the consequent alterations in the lifestyles have great impact on the traditional dwellings and their fabric for they harbor an intense type of human-environment relationship. Hence, utilization, conservation or even survival of these elements of cultural heritage becomes a formidable challenge (Dikmen, 2014).

In this context, quality of life[4] becomes an issue at the fore front. The rapid urbanization with globalization has become an important problem affecting the quality of life (Öztürk et al., 2013). The process of social and economic change necessitates the constant redefinition of the resultant problems regarding urbanization and construction. For this reason, it becomes a priority to focus on the environment and quality of life in existing and newly created urban areas (Turgut Yıldız, 2007). Briefly, quality of life includes physical, social, economic, and psychological factors, and it is identified with the individuals' satisfaction to the extent that the environment they live meets their expectations (Öztürk & Özdemir, 2013). The concept of quality in architecture is a process that begins at a single building scale and reflects the environmental quality, as a whole (Korur et al., 2006). Qualifications of the dwelling and its surroundings is one of the most important indicators of the quality of life and the fact that they are well-planned ensure high user satisfaction (Türkoğlu et al., 2007). Residential satisfaction is determined as a reflection of the level at which the residential space helps its users achieve their

[4] Quality is 'the degree of fitness for purpose'. These purposes in quality in architecture can be explained as employer/user needs and demands (Gültekin, 1998 cited in Korur et al., 2006). J.M. Juran defines the quality simply as fitness for use (Dereli & Baykasoğlu, 2003). Demands and needs bring different dimensions to quality, the boundaries of which are constantly expanding due technological developments. The concept of quality, which has a dynamic feature in terms of its meaning, changes and develops according to user needs (Korur et al., 2006).

goals. The feeling of satisfaction or dissatisfaction with the dwelling, which arises from the conflict or contradiction of the user's wishes and expectations with the realities, manifests itself at different levels (Günal & Esin, 2007).

After all, changing life standards and preferences of individuals necessitate a re-evaluation of relations in urban space (Demirkaya, 2010). In these circumstances, the building users are confronted with two options: adaptation or abandonment. The adaptation can apply to both the object and the subject. Accordingly, it is possible to witness that the traditional dwelling users tend to exhibit one of the three main behavioral patterns:

- continue to use the house and try to make do with what they have,
- continue to use the house but try to change it,
- abandon the house.

In the first case, users confine themselves to the givens. Whether they are satisfied or not, they are obliged to live in the already existing environment and conditions due to political, economic, or social constraints. If the user is unsatisfied, these constraints eventually lead to further problems for both the user and the building. In the second case, users are obliged to live in the already existing environment and conditions but also in a struggle for change. This struggle and motivation for change lead to interventions to the buildings. Although these interventions support continuity in use, ones that are aesthetically or structurally incompatible, illegal, or at risk of damaging the authentic structure led to other problems. Various field studies have revealed that there are some problems in the interaction of the authentic structure and materials with the physical arrangements that enable traditional dwellings to respond to the current needs and demands developed by the cultural and vital changes (Perker & Akıncıtürk, 2011). In the last case, the users either voluntarily or involuntarily abandon their houses due to political, economic, or social constraints or dissatisfaction.

As is seen, change in structures and their fabric and the demand for change of their users under the influence of changing lifestyles and living standards disrupt the continuity of the fabric both physically and socially by harming the authentic structures and causing the inhabitants to leave the area. For this reason, change becomes both the reason and the consequence of these problems. In order to eliminate these problems and ensure both physical and socio-cultural continuity, this impasse must be overcome, and the destructive power of change must be ruled out.

There are two facts that need to be known and accepted in this regard. The first is that **change is inevitable**. Change can be physical or social and it has great influence on the built environment, whether it is human-made or not. As a matter of fact, physical and social reflections of these influences also mutually affect each other. The second is that **buildings live as long as they are used**. Ensuring the use and adoption of buildings helps in their conservation as they will be maintained by their users.

Overall, it is important to accept a historic building as a component of a socio-cultural organization and building architectural system that is changing and reliant on the behaviors and preservation of its user (Murillo, Fouseki & Altamirano, 2021). Although the time is a factor that creates, adds value to and requires conservation of the traditional dwellings and their fabric, the effects of change over time (on both the human and the environment) should be understood and managed. Otherwise, it causes and will continue to cause irreversible losses in the traditional fabric.

2.4 Community Involvement and User Participation in Conservation of Traditional Dwellings

Community involvement has become a substantial approach in conservation of urban heritage in terms of their preservation, management, and promotion. Since urban heritage can become a means of sustainable development by offering benefits to the daily lives of the cities' inhabitants, involvement of communities helps engagement

and cooperation with and for the local people. Thus, support of the people for its safeguarding and use can be achieved (Scheffler, 2017).

Importance of community participation in the conservation of the built vernacular heritage was addressed internationally and exclusively in the 'Charter on the Built Vernacular Heritage' of 1999. In this document, 'homogenization of culture and of global socio-economic transformation' is problematized within the context of conservation of the built vernacular heritage, and these growing threats are proposed to be responded through works carried out 'by multidisciplinary expertise while recognizing the inevitability of change and development' and 'in a manner which will respect the integrity of the structure, its character and form while being compatible with acceptable standards of living' while stipulating 'involvement and support of the community, continuing use and maintenance' (ICOMOS, 1999).

Particularly, survival and functional continuity of the traditional dwellings and their fabric depends on the convenience for today's residential use. Since housing occupancy is a basic right, it is believed that the traditional dwelling and its fabric should be either livable or able to meet the current housing requirements to a minimum. Therefore, 'usability' is the common condition for all requirements in ensuring livability, conservation, and sustentation (Özcan & Gültekin, 2005). In order to identify the usability level of traditional dwellings and its fabric, following should be examined (Gültekin, 2007):

- difficulties in usage
- facilities in usage
- necessities and expectations of users

However, user needs change over time. These changes that are observed in user needs and expectations reveal the functional aging process in structure and fabric (Atasoy, 1973). The structures and the fabric they compose are expected and required to keep up with the changing living conditions and standards for continuity in their use, therefore conservation of structures with their inhabitants depends on the

buildings and their fabric being able to respond to the changing living conditions and user needs and expectations. For this reason, traditional dwellings, which harbor the most intense type of human-space relationship, should be conserved with their users and with the participation of their users.

To achieve realistic and living results in the interventions to be proposed to the historical fabric and structures, it is important to act in compliance with the social structure. Otherwise, the social structure changes hands and this leads to following problems (Yaygel, 2007):

- transformation of the fabric into low-income slum areas with different migration generations,
- loss of the users' emotional attachment to the places they use, emergence of the problems of indifference and alienation, and loss of their motivation/guiding values for conservation,
- inability to afford the increasing usage costs due to the increase in rent and abandonment of the fabric by the existing users,
- relocation of users in different parts of the city and formation of new problem areas in the city due to the continuation of their problems/ongoing problems
- increase in the intensity of use of the fabric, and exposure of historical structures to interventions that damage their authenticity by being used beyond their capacity and often in functions other than the original ones.

In order to eliminate these problems and ensure continuity in use, the area to be intervened should be addressed with all its components and evaluated according to today's conditions with the participatory approaches that involve the users. In terms of quality of life, the dwelling and its surroundings should be considered the from both physical and social aspects (Türkoğlu et al., 2007). For this, it is necessary to adopt and implement the integrated conservation approach. Due to their nature, traditional dwellings should be conserved with their users, through interdisciplinary studies, together with the fabric they compose and the physical and social aspects that concern these different scales.

2.4.1 Evolution of Integrated Approach and Inclusion of Community and User in Conservation

Conservation practices in built environments have been handled with different approaches in different periods. Since the 19th century, under the leadership of European countries, a contemporary understanding of conservation, which is based on scientific methods and carried out within the framework of certain theories and principles, has started to become prevalent (Erder, 1975). As it is known, various declarations and charters have been published in the field of conservation at national and international scales over time.

To this day, international cultural institutions such as UNESCO and ICOMOS are working to maintain the awareness of conservation by updating the principles that are periodically discussed (Ahunbay, 2017). Currently, the internationally accepted conservation approach envisages the preservation of buildings along with their environment, and the maintenance of their physical, social, functional, and economic integrity while ensuring continuation of their use with an understanding of 'integrated conservation'[5] that was introduced in the Declaration of Amsterdam (ICOMOS, 1975). This interdisciplinary approach adopts the goal of 'preserving and disseminating knowledge about cultural heritage in an integrated way, in close connection with socio-economic and cultural development at macro and micro

[5] 'Integrated Conservation is a part of the general process of planning and management of cities and territories in a multi-referential perspective (economic, political, social, cultural, environmental and spatial). Main objectives: promoting interdisciplinary approach in physical and normative initiatives in planning of heritage conservation sites, towns, historical centers, villages or suburbanized areas; promoting the use of models for institutional, operational and public participation that can facilitate communication among experts of different disciplines related to heritage; creating understanding of some research-based principles for interdisciplinary communication by means of practical tools' (Council of Europe, 2012).

level', and the concepts of 'collaborative conservation' and 'participatory conservation', which center upon inclusion of all stakeholders in conservation process (cultural, social, economic, and environmental) and community engagement (Spiridon, 2013). Regarding the objectives of these rising approaches, the significance of working with a team composed of experts from different disciplines and locals came under the spotlight in the field of conservation of cultural heritage (ICOMOS, 1987).

Nonetheless, efforts on involving public and community members in conservation process were present long before the emergence of the concept of integrated conservation. In fact, the oldest attempts began in 1964 with the Venice Charter and developed over time with various international documents and activities (Spiridon & Sandu, 2015).

With the Venice Charter of 1964, where the foundations of the idea of community involvement were laid through appropriating the monumental works to people and highlighting the importance of transferring cultural heritage to future generations (ICOMOS, 1964). However, it was not until the Washington Charter of 1987 that the community involvement was mentioned internationally and explicitly. It was suggested in the document that the international principles to be followed in conservation areas should be composed of both the elements regarding the interventions to be made to the physical environment and the factors related with ensuring community involvement (ICOMOS, 1987).

Thereafter, this perspective and reference was used in various documents and publications. As the relevancy of the community involvement increased in conservation, there emerged the need for developing a common ground for the definition of this concept. Accordingly, in the Community Involvement in Heritage Management Guidebook by the Organization of World Heritage Sites (OWHC) it was stated that the 'community involvement in urban heritage is about involving, including and the common acting of people, institutions and organizations, that are interested in the urban heritage, affected by the urban heritage or live with or close

by the urban heritage, in the preservation, management and promotion of the urban heritage and its beneficial use for the local communities' (Scheffler, 2017).

Today, international principles to be followed in conservation areas include elements related to ensuring community participation as well as interventions to the physical environment (ICOMOS, 1987). In accordance with the principles determined by UNESCO and ICOMOS, it is necessary to ensure the participation of local people and conservation experts, beginning from the planning stage, in the interventions to be made in conservation areas (ICOMOS, 1964; ICOMOS, 1990; UNESCO, 1972; UNESCO, 2003).

2.4.2 Community Involvement and User Participation in Conservation of Traditional Dwellings in Türkiye

In the field of conservation, as a United Nations member, Türkiye is bound by the principles and decisions of UNESCO, ICOMOS and the World Heritage Committee. Additionally, the provisions of the Law No. 2863 on the Conservation of Cultural and Natural Assets (published in the Official Gazette dated 07.21.1983) is implemented.

According to the Law No. 2863, Conservation Boards are endowed with comprehensive authority, and considered as the primary decision-makers of the conservation process. For instance, in the Article 8, 'Conservation Boards are empowered to determine the conservation areas of natural and cultural assets that need to be safeguarded, which are registered in accordance with the Article 7, and to decide whether construction and installation can be done within these areas'.[6]

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[6] *'Madde 8 – Yedinci maddeye göre tescil edilen korunması gerekli kültür ve tabiat varlıklarının korunma alanlarının tesbiti ve bu alanlar içinde inşaat ve tesisat yapılıp yapılamayacağı konusunda karar alma yetkisi Koruma Kurullarına aittir'* (translated by the author).

Moreover, within the scope of the same law*, 'Koruma Uygulama ve Denetim Büroları'* (KUDEB) were introduced: 'Conservation, implementation and inspection offices are established within the body of metropolitan municipalities, governorships, municipalities authorized by the Ministry to carry out the operations and practices related to cultural assets, and in which experts from professional fields such as art history, architecture, city planning, engineering and archaeology will be assigned'.[7]

Türkiye also committed to protect cultural assets which are 'the practices, representations, expressions, knowledge, skills and related tools, materials and cultural spaces that communities, groups and in some cases, individuals define as a part of their cultural heritage' by signing the Intangible Cultural Heritage Contract in 2003 (Akarca, 2019).

2.4.2.1 Situation and Problems in Practice

Nevertheless, survival of the traditional dwellings and their fabric cannot be achieved successfully in Türkiye due to the imposing understanding of conservation that restrain usage or participation of the user. Although some of the specialists put significant effort on integrating the community and the users into the process, legal and administrative framework remains insufficient in this regard. To elaborate, there exists a formal and political attitude in Türkiye that tries to ensure conservation through the legally defined sanctions (Asatekin, 2004). When a site or a building obtains a conservation status, strict laws and regulations within this framework mark out the borders for the conservation decisions. Eventually, this creates high

[7] *Büyükşehir belediyeleri, valilikler, Bakanlıkça izin verilen belediyeler bünyesinde kültür varlıkları ile ilgili işlemleri ve uygulamaları yürütmek üzere sanat tarihi, mimarlık, şehir plânlama, mühendislik, arkeoloji gibi meslek alanlarından uzmanların görev alacağı koruma, uygulama ve denetim büroları kurulur'* (translated by the author).

dependency on the authorities, and restricts the interventions of users. In other words, the decision-making process in conservation of cultural heritage becomes top-down, contrary to what it should be.

If the issue needs to be addressed further, local administrations have broad authorities in the renewal practices in historical areas in Türkiye. However, participation of the local people and conservation experts from non-governmental organizations are very limited. In fact, the regulation of public participation and the expert consultation are left entirely to the will of the administration (Akarca, 2019).

As a result, the physical, social, and cultural fabric of the areas under state protection is transformed with projects prepared with commercial concerns, far from the purpose of conservation. It is observed that such methods applied in Türkiye do not comply with the basic principles followed in urban transformation studies, and are insufficient in terms of conservation, problem solving, and public and expert participation (Akarca, 2019). However, it should be kept in mind that not only legal and administrative bodies, but other parties such as conservation specialists from different disciplines, investors and users with different and often contradictory expectations have right to speak in conservation planning (Can, 1993).

If moved on from here, it can be claimed that the integrated conservation approach has still not been fully adopted and put in practice in Türkiye. To get to the bottom of this, when the publication dates and contents of the official conservation rules and regulations are examined, it is possible to see that the socio-cultural and socio-economic aspects of conservation have recently become an issue. Even though the first law of the Republican Period concerning the antiquities was enacted on 1973 (Law No. 1710), it was not until 2004 (changed Law No. 2863 regarding Law No. 5226 and enacted on July 14, 2004) that the policies for socio-economic development and community participation were made necessary.

As is seen, the laws that require applications to solve these social concerns are not only late, but also mentioned in general terms in contrast to the instructions for conservation of the built environment, which are defined by legislations in more

details. In that sense, it is possible to suggest that the legal and administrative framework in Türkiye remains insufficient in terms of identification of the methods to be applied to ensure user participation in conservation. Since there are neither details nor guidance, both the emphasis and solution of the issue relies on the incentives of the experts in charge. These experts are mostly architects who concentrate on the physical aspects of conservation with technical bias. However, experiences show that the problems arise when the socio-cultural dimension of conservation and the needs of the users are not taken into consideration with priority (Can, 1993).

As mentioned before, opinions of users can be fully comprehended through integration of specialists from disciplines who are trained in this subject and can be effectively used as design input through involvement of these experts and various stakeholders in the decision-making process. Howbeit, systematic and scientific work remains insufficient for understanding and involving the opinions of users in the decision-making process in conservation (Altınörs Çırak, 2010).

2.5 Reviewing and Reframing the Process: Integrating Needs and Expectations of Users into the Conservation Process of Traditional Dwellings

For the buildings to survive and continue in their use, the experiences and opinions of the building users should also be integrated into the conservation process. This goal of studying and understanding the experiences of the users can be achieved through participatory approaches. However, it should be kept in mind that the participatory approaches in conservation projects are different than the participation in the user-based design or design process. In conservation, the improvement and continuation of the current use is foreseen, and it is necessary to evaluate the design in terms of different contexts such as historical, cultural, urban, functional, social, and economic (Akarca, 2019).

When it comes to the cases including traditional dwellings, it becomes difficult to establish this balance. Before all, it must be admitted that traditional dwellings cannot be conserved solely based on user experience due to these contextual parameters. However, it does not mean that the user experiences and opinions cannot be considered or included in conservation decisions. What is important here is the limits and form of the users' contribution to the process. Each case should be evaluated within itself, and as a result, these boundaries should be shaped according to the characteristics and requirements of the case.

In every case, there are parameters regarding urban, building, and sociocultural-economic scales, which need to be examined for proposing user-based interventions in the historical structure and fabric. Consideration of the social structure is important for achieving realistic and successful results. In line with this purpose, sociocultural and economic data of the users, and their needs should be examined. Aygen (1992) identifies the data to be collected from users under four headings:

- Demographic: age, gender, housekeeping, head of household, number of children, education level, occupation, income, place of birth, and duration of living in the area,
- Living Conditions: (complementary for demographic data) number of rooms, living space, structure, and the state of being affected by the physical features of the area,
- User Structure: house ownership, desire, and capacity to own a home, ability to pay rent, population growth and mobility trends,
- Behavior and Attitude: emotional attachment to the structures and fabric, use value determinations, habits of living and leisure time, attitudes towards conservation and participation.

Also, in order to ensure continuity in the traditional fabric, it is necessary to analyze the user needs and expectations.

2.5.1 User Needs and Expectations

Regarding the prevailing approach on human-environment interaction, housing should not be understood as a 'hole through which people can poke their head', but rather as a fabric that must be kneaded together with people (Öymen Gür, 2000). Based on this relationship, innate tendencies come to the fore. These tendencies such as need, want, drive, urge, motive etc. form the human behavior, and direct the formation and transformation processes of spaces. As one of the higher orders of these tendencies, human needs are the important determining factors of space arrangement. Basically, human needs can be defined as the necessary conditions for individuals to fulfill their duties and actions in society in the most effective way. In other words, they are all environmental and social conditions that help people to live their lives without discomfort from physiological, social and psychological aspects and to be productive in their work (Atasoy, 1973; Günal, 2006; Özyılmaz & Aluçlu, 2009)

Nevertheless, the term human needs remain rather general. In architecture, the conditions that the place must provide for the user are referred as user needs. In the user role, people expect that the space should meet their needs and satisfy their goals (Günal & Esin, 2007). Therewithal, the features that people expect from the place emerge as a result of user needs. Basically, these expectations are the minimum qualifications and conditions that the physical environment must have for the users to perform their actions (Atasoy, 1973; Alga, 2005) such as sheltering, sleeping, feeding, working and resting (Bekar & Altuntaş, 2021).

User needs have been classified in various scopes by different researchers to date. According to the literature review conducted by Sarı (2008), Atasoy (1973) groups them as anthropometric needs, needs regarding physical environment, needs regarding health conditions, needs regarding safety, needs regarding social environment conditions, needs regarding spiritual environment conditions, needs regarding privacy, and needs regarding environmental ties; Bayazıt (1982) classifies them as technical, environmental, and anthropic needs; Buğday (1991) and Gül

(1993) examine them under two main headings as physical and psycho-social needs, which are divided into subheadings within themselves; Kuş (1992) identifies them as physiologic needs, psycho-social needs, safety needs, and needs regarding health; and Şener (1977) classifies them as physical change needs, human survival and dynamic change needs, and psychological needs.

Table 2 User Needs - *based on the study of Sarı (2008)*

	Atasoy (1973)	Bayazıt (1982)	Buğday (1991) & Gül (1993)	Kuş (1992)	Şener (1977)
User Needs	Anthropometric	Technical	Physical	Physiologic	Physical change
	Physical environment	Environmental	Psycho-social	Psycho-social	Survival and dynamic change
	Health conditions	Anthropic		Safety	Psychologic
	Safety			Health	
	Social environment conditions				
	Spiritual environment conditions				
	Privacy				
	Environmental ties				

As is seen from the works of various scholars, user needs are multidimensional, just like the space itself. It is known that the user-based meaning layers together with the physical texture form spaces (Arayıcı, 2018). Therefore, the qualities suitable for people should be known and the necessary environmental and social conditions should be offered for them. Even though this understanding is meaningful in theory, it encounters some obstacles in practice. As clearly stated before, user needs and expectations should be actively involved in the decision and design process of the adaptations and changes to be made on the used structure.

Challengingly, user need is an essentially unobservable and abstract concept whose concrete manifestation is human behavior (Erkman, 1982; Özyılmaz & Aluçlu,

2009). In this respect, understanding user needs is possible by examining the relationship between physical environment, human and human behavior with their reasons (Bekar & Altuntaş, 2021; Özyılmaz & Aluçlu, 2009). From the point of suitability of the physical and psychological environment of the space for its purpose, it is important to correctly determine the needs of the audience who will use it (Bekar & Altuntaş, 2021).

2.5.2 User Participation in Conservation

Community involvement in urban heritage indicate involving, including and collective acting of relevant agencies in preservation, management, promotion, and beneficial use of the urban heritage. Involving these agencies, which are the people, institutions and organizations who are interested in, affected by, or live within or close by the urban heritage, refers to including them as participants in participative, engaging, collaborative or cooperative actions (Scheffler, 2017). It is about strengthening their ability and capacity to participate in conservation and management decision making process (Manandhar & Tiwari, 2020). There are certain objectives and tasks for community involvement (Scheffler, 2017):

- Recognize, understand, coordinate and balance: Recognizing and understanding the local needs and interests that have an influence on the urban heritage and its surrounding area. Coordinating and balancing these needs and interests among stakeholders regarding the safeguarding needs of urban heritage.
- Link, connect, communicate, empower: Linking the needs and interests of the people with the urban heritage, and communicating benefits, opportunities, and values of the urban heritage. Thus, connecting people with the urban heritage and empowering them through the benefits that can be drawn from them.

- Strengthen abilities and capacities: Strengthening abilities and capacities of people for encouraging their contribution in preservation, management, and promotion of urban heritage.

After all, communities have resources that go beyond and complement the knowledge and experience of political and professional bodies. Participatory research is conducted for identifying and clarifying the views, concerns and experiences of people and providing them the opportunity to improve their conditions. It is people-centered since it refers and responds to the people's needs and experiences. With the help of a people-centered approach, it is possible to virtuate these resources for the benefit of both the heritage and the community by offering long-term conservation and co-management (Manandhar & Tiwari, 2020).

In this context, Arnstein's 'Ladder of Participation' is a frequently used work to explain the influence of the participants. Based on this study, Chan (2016), developed 'Ladder of participation for heritage management' in order to present a framework for understanding the meaning and scope of different levels of participation in heritage management. According to this framework, there are stages of participation that start from the most passive form and become increasingly active:

1. Education / Promotion: educating the public and raising public awareness about the importance and values of the heritage.
2. Protection / Conservation: acknowledging the public that their heritage is safeguarded by the competent authorities.
3. Consultation: the public can express their opinions.
4. Advisory: the public can comment and deliver their advice on the preservation projects, but still has limited influence on the process and decisions.
5. Partnership: experts or the government are collaborating with the public in heritage management (co-management).

6. Grassroots-led negotiation: the public can take action by starting campaigns or demand information from the authorities.
7. Self-management: the public has the power to negotiate and reject.

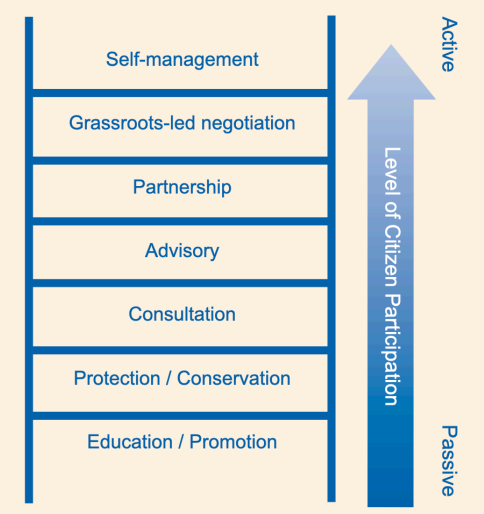


Figure 2 Ladder of Participation for Heritage Management (Chan, 2016)

There are also other studies on the typology of participation in conservation. Manandhar and Tiwari (2020) present a typology of local participation in conservation as 'passive participation, contractual participation, consultative participation, participation among colleagues, participation limitation, community self-mobilization'.

Moreover, regarding the work of Spiridon and Sandu (2015), participation forms can be categorized from involuntary to functional as 'involuntary participation 'by use', passive and passive interactive participation, interactive participation, participation for material or non-material incentives, volunteer/spontaneous participation, professional NGO participation, and functional participation' (Figure 3).

In the light of this framework, it is possible to understand the diverse types of participation. There are methods that serve different purposes and grant different

powers to different stakeholders, and therefore it is necessary to choose the most useful and appropriate method among them.

No.	Typology	Characteristics	Method
1	Involuntary participation "by use"	This level is most often found in communities where the members only "use" the heritage and they are just receivers of the general information regarding cultural heritage assets in an informal way and participation is simply a pretence (photo 1).	Living "history" in the present
2	Passive and passive-interactive participation	The community members are invited to participate by being told what has been decided or has already happened or will happen. Information is made formally through local communications, media tools or by using project mapping and augmented reality and offers the opportunity to people themselves to ask and reflect about the history of buildings, sites and other cultural elements of the area in which they live. This is actually the beginning of the passage from local/regional/national history to personal history through those cultural elements of the residential area. At this level we can also find community members involved in the process of preservation and restoration of the cultural heritage assets. Having access to the assets creates the possibility that community members may finance the conservation work (photo 2).	"Manipulation"
3	Interactive participation	At the next level of participation the community members are involved in professional teams' work (finding materials and identifying the techniques used by the artists, establishing the date of manufacture and investigating the optimal materials, identifying the role and significance of some cultural heritage assets in and for local community, etc.), in joint analysis and the development of action plans regarding the community heritage. At this level participation can be seen as a right.	Promotion of cultural rights
4	Participation for material or non-material incentives	At this level the people accept involvement only if they receive some reward: e.g. farmers may provide fields and labour and for them rewards such as food, cash or other material incentives are important. Young people can be stimulated by e-learning technologies and online apps to participate in integrated learning processes (using innovative methodologies like Living Labs and ICT platforms). At this level, access to information and education become part of the right of access to culture.	Access to information and education
5	Volunteer/ spontaneous participation	The community members participate by taking initiatives − spontaneous or organised − independently of external institutions in order to change systems and retain control over how resources are used. As groups take control of local decisions and determine how available resources are used, so they have a stake in maintaining structures or practices. Self-mobilisation and volunteering is in fact an active way to reflect different approaches and traditions based on free choice, desire and motivation. At this level the people do not request reward as they are conscious of their contribution to the general interests of the community or society.	Self-mobilisation, self-determination and association
6	Professional NGO participation	NGOs are like an inventory of different kinds of participation. Among the more important NGOs in the field we may mention: IUCN, Europa Nostra, ICOMOS, ICOM, ENCATC, ECOVAST, IUCN (state level, national level).	Empowerment
7	Functional participation	At this level participatory conservation (public/community participation) is seen as an intrinsic part of collaborative conservation (stakeholder engagement); community members participate by being consulted or by answering questions. Practically they are involved in social and cultural enquiries and surveys, in working groups and meetings to discuss problems and policy regarding local heritage; at this level creativity, self-expression, self-confidence, freedom of opinion and expression are promoted.	Consultation and negotiation

Figure 3 Typology of Participation in the Integrated Conservation Process (Spiridon & Sandu, 2015)

CHAPTER 3

CONSERVATION OF TRADITIONAL DWELLINGS: CASE OF MILAS, TÜRKIYE

3.1 Understanding the Different Contexts of Milas

Different contexts of Milas were studied within the scope of literature survey. In this section, the collected data on geographical and historical context, physical context, and social context of Milas will be explained.

3.1.1 Geographical and Historical Context of Milas

Milas, a district of Muğla province in Türkiye, is on the southwest shoreline of the country and surrounded by various natural formations. There are Bafa Lake, Beşparmak Mountains and Çomakdağ to the north; Gökova Gulf to the south; Marçalı Mountains to the southeast; Kurukümes Mountain, Koca Mountain, and Ak Mountain to the east; Bodrum Peninsula, Mandalya Gulf, Sodra Mountain and Ilbıra Mountain to the west of the settlement (Tekin, 2003; Kapluhan, 2014).

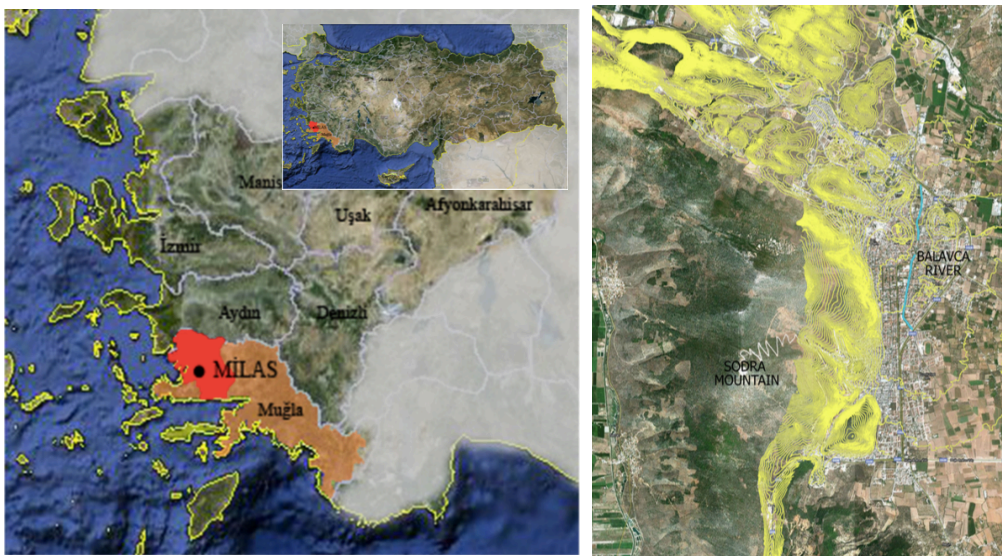


Figure 4 (METU REST 507-508, 2012)

It is known that the area has been inhabited since antiquity and the significance of the settlement is mainly due to the overall features of the site, which are greatly defined by the topography. Although the exact foundation date of the settlement is uncertain, earliest information on the history of Milas dates to the 6th century B.C. when the Lydians were prevailing in the Caria Region (Usta, 2018). Following the Lydians, the area was ruled by Persians, Alexander the Great, Romans, Byzantines, and Turks. During the principalities period, Milas became a part and specifically the center of Menteşeoğulları in 1261 due to its strategically beneficiary location. This feature of the settlement was also prominent during the following Ottoman domination and the Turkish War of Independence when Italians occupied the area. After a long period with continual shifting of dominations, Milas has become a district of Muğla province in 1923 with the proclamation of the Turkish Republic (Kapluhan, 2014). Overall, various communities once inhabited this area and contributed to the formation of different layers of the site.

3.1.2 Physical Context of Milas

Mylasa, as the capital of the Caria region, was located at the foothills of the Sodra Mountain (Küçükeren, 2010). Over time, the city expanded eastward. The natural formations such as Sodra Mountain, Hıdırlık, Yel Değirmeni, Topbaşı and Hisarbaşı Hills, and Balavca River had defining role in the formation of the city (Usta, 2018).

The urban fabric of the Persian period was in almost the same area as the previous period. The built environment of this period stands out with its marble structures. Although there is no definite information about the City Wall, estimations can be made about its existence and location through the Baltalı Gate, cemeteries and Zeus Osgos Temple. There are castle and building remains from this period on the Sodra Mountain and Hıdırlık Hill (Usta, 2018).

In Antiquity, the Hıdırlık Hill was the main settlement area, where the agora and the acropolis were located. In the following Roman period, this place was used for the same functions. In addition, structures such as stoas, gymnasium, public baths and water roads were built (Küçükeren, 2010).

The settlement area expanded again towards the east during the Roman and Byzantine periods, and the aqueducts drew the border in this direction. On the south side of the Yeldeğirmeni Hill was the necropolis. In addition to the Baltalı Gate, Gümüşkesen Mausoleum and Uzunyuva Menandrom Column, which can still be seen today, the Augustus Temple, which can not be found today, was also built in the Roman period (Kızıl, 2002).

With the year 1261, the Menteşeoğulları period started in the area. During the time when Milas was the capital, large-scale structures such as the Great Mosque were built here. Milas, which lost its title of being the capital city in the 14th century due to security concerns, began to lose its importance (Taşkıran, 2004).

In the Ottoman period, Milas regained its importance and expanded in all directions with 12 neighborhoods by the 19th century. It is known that the settlement was managed by proprietor families who had their own mansions. Again, in this period, governmental buildings and mosques were built. In terms of commercial activities, the Ottoman Bazaar (Arasta) and the Hisarbaşı market on the Tabakhane Street stand out (Usta, 2018).

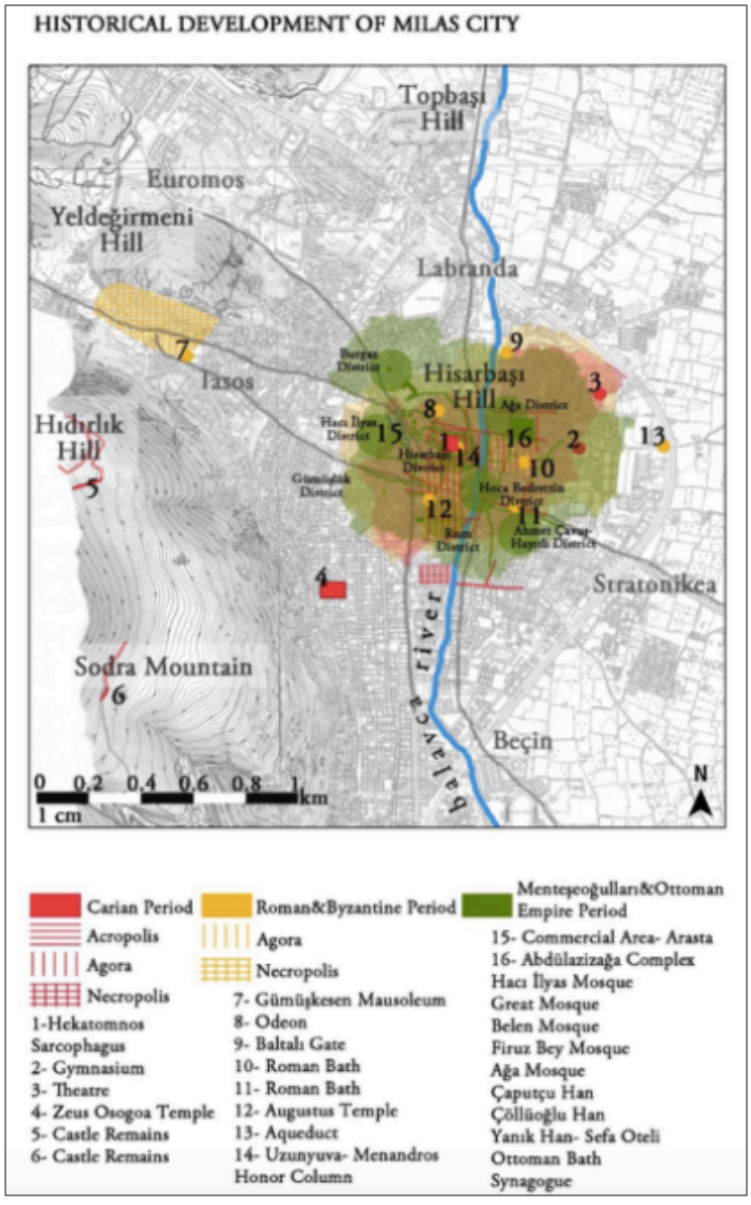


Figure 5 Historical Development of Milas (Usta, 2018)

In the Republican period, the border of Milas extended from the Sodra Mountain to Atatürk Boulevard. It is known that there was no settlement beyond Madam Murat's house. This boulevard was also known as the 'Ornament Road' (Süs Yolu) and used for walking in summer. On this road that reaches many social facilities, Ata Park, Merchants Club (Tüccarlar Kulübü), İstikamet Cinema and the City Stadium was located. Also, it is possible to get to the Arasta, which still maintains its function today, and the Jewish Neighborhood via the same road. While there was only one road (Milas-Muğla) to travel to the other cities until 1950, SSK Hospital was built on the Top Hill in 1954, and Milas-Söke road and İnönü Street were opened during this period (Usta, 2018).

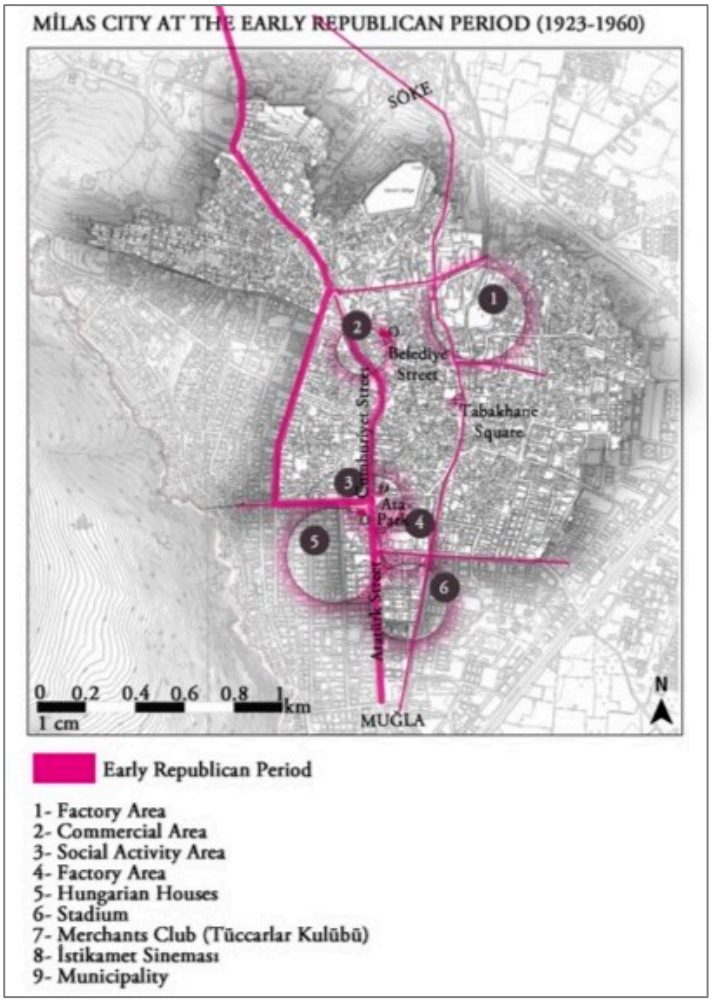


Figure 6 Milas City in the Early Republican Period (1923-1960) (Usta, 2018)

3.1.3 Social Context of Milas

The earliest information on the social structure of the area dates to 18th century. It is known that between 18th and 20th centuries, Rums, Armenians, Jews and Turks inhabited the area. Even back then, the site has been known for its diverse population composed of different communities, cultures and lifestyles that formed their distinct neighborhoods and dwellings. Daily life organizations, along with the cultural and economic activities are conveyed from a generation to another within the neighborhoods and both tangible and intangible values are kept alive (Usta, 2018).

In the 19th century, wealthy landowner families of Milas invited Rums from the Islands for their craftsmanship and industrial needs. While there were about 30 Rum families in 1738, they formed a neighborhood consisting of 550 households in the 19th century with the developments in time. Neighborhoods between Hisarbaşı and Yeldeğirmeni Hills, known as Firuzpaşa and Gazipaşa, were called the 'Rum Neighborhood' at that period (Akarca & Akarca, 1954). Over time, the Rums, who had an important share in the economy of Milas, were generally engaged in trade. Although the Rums moved to Greece with population exchange in 1924, it is known that many Rums still lived in Milas during the Republican period (Usta, 2018).

Another minority group living in the region in the 18th century was the Armenians. Although they did not live in Milas as long as the Rums, the Armenians came here for trading, and they were engaged in trade until the second half of the 19th century. Eventually, Armenians left the area (Usta, 2018).

Jews came to Milas from Rhodes in the 19th century. At the beginning of the 20th century, 150 Jewish families lived in Milas (Taşkıran, 2004). They settled in Hoca Bedrettin Neighborhood, which came to be known as the 'Jewish Neighborhood' (Tekin, 2003). They had a synagogue where today's Public Education Center is located, although traces of it are not found today, and a cemetery near the Gümüşkesen Mausoleum. The Jews, who were engaged in trade and agriculture during the period they lived in the region, forged a commercial bond between Muğla

and Izmir. Since the establishment of the state of Israel in 1948, they have left Milas over time (Usta, 2018).

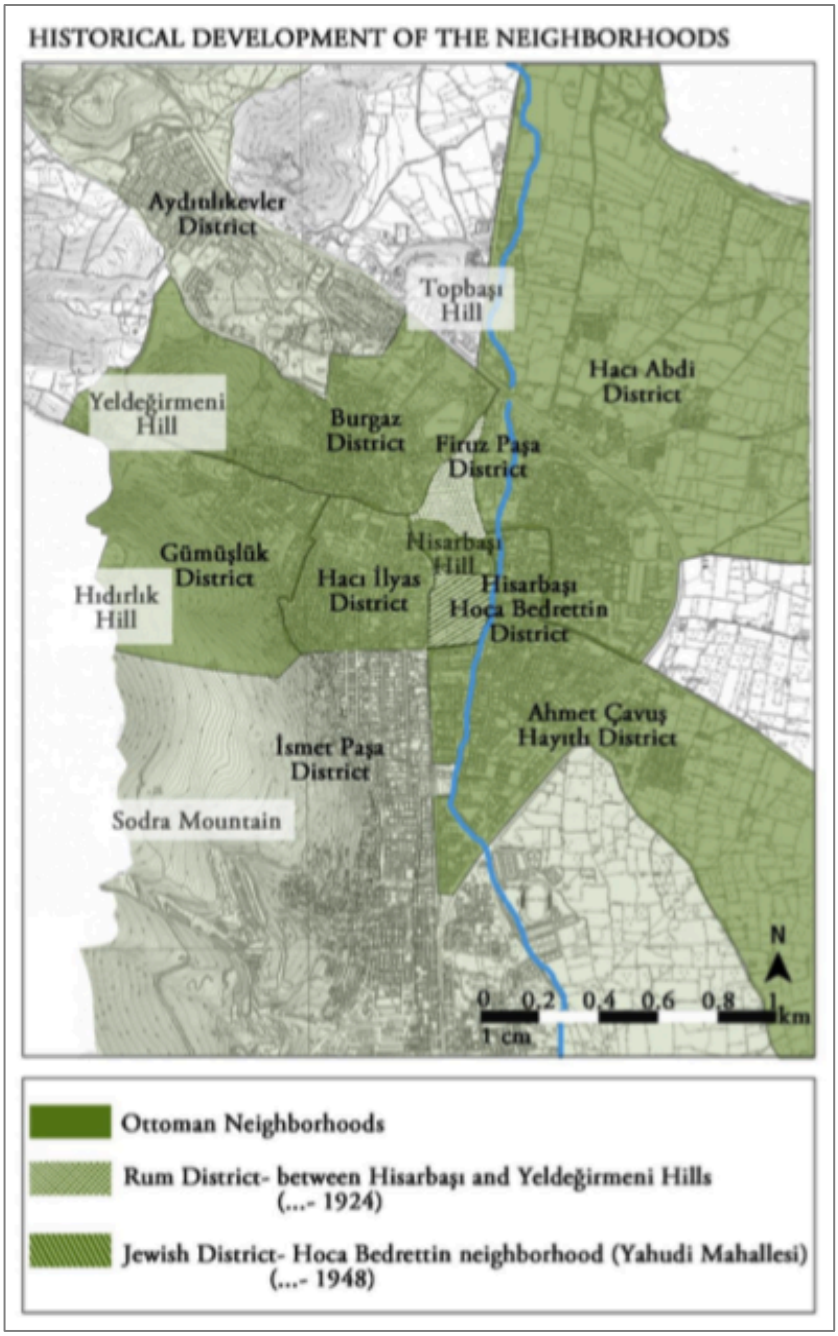


Figure 7 Historical Development of the Neighborhoods (Usta, 2018)

In other respects, Milas was also subject to internal migration. From 20th century onwards, Milas was subject to in-migration mainly due to the insurrection of Dersim in 1939, increasing employment opportunities in the mining of Etibank in 1970s, obstacles in the way of agricultural production (especially tobacco), and growing tourism activities in Bodrum (Usta, 2018). Eventually, there was a growing demand for housing as a result of increasing in-migration and population. Regarding this demand, by the end of the 1990s, agricultural lands were open to construction and due to the state policies, main source of income of the locals shifted from agriculture to services sector. This shift in the source of livelihood eventually led to further migration (both in-migration and migration from rural to urban) and increase in the rate of urbanization, which has been lower than the average of Türkiye up until these developments (Kapluhan, 2014).

According to the population count of 2021 by TUIK, Milas has a population of 145.275 people. Today, the settlement is at the fore with olive and olive oil productions. In fact, Milas is the most important area in Aegean Region in terms of these productions, constituting 10% of the production in the country. Also, beekeeping, dairy farming and aquaculture are important in the area. There used to be chromium, iron, and bauxite mining activities in the region. However, currently marble, felspar and cannel coal mining are in the fore front. Apart from these, carpet weaving is important and famous in Milas. Although it does not provide significant amount of income anymore, some of the residents continue this artisanship. In terms of nature tourism, trekking, climbing, and camping are in the fore front. Although Milas has potential in terms of both the capacity and types of attractions for tourism activities, the region is overshadowed by Bodrum (Milas Belediyesi, n.d.).

3.2 Understanding the Characteristics of Traditional Residential Fabric and Traditional Dwellings in Milas

Characteristics of traditional residential fabric and traditional dwellings in Milas were studied within the scope of the literature survey. In this section, the collected data will be explained.

3.2.1 Characteristics of the Traditional Residential Fabric in Milas

In the central district of Milas, which has been one of the important settlements since early times, the settlement pattern of the Turkish period has developed on the ruins of the previous period, depending on its own characteristics. Located in the middle of the city, Hisarbaşı Hill is the oldest residential area. From here, the city spread to the plain in the South and the hills in the North, East and West directions (Akarca & Akarca, 1954). Although it is possible to come across examples of traditional Milas houses within the city, the traditional urban fabric is particularly developed in Hisarbaşı, Hoca Bedrettin and Firuz Paşa Neighborhoods (Çakarcan, 1988).

The traditional urban fabric is dominated by two-storey houses with courtyards or gardens. Streets within the settlement generally create an organic fabric that is compatible with the topography. The houses are formed in accordance with the street structure and located apart from each other in a manner that also facilitates close neighborhood relations. Since right-angled plans are preferred in the rooms, the organic texture or disorder in the lots are corrected with triangular projections. On the street façades, the projections on the first floor, chimneys, and latticed, wooden barred, shuttered windows are important features of the area (Bayazıt et al., 1968). Instead of the interiority that generally prevails in other Anatolian regions, necessary spaces were left between the houses through placement of buildings and projections in such a way that do not affect each other. Every street has a different character that is shaped by the topography and houses with their eaves, projections, entrance gates, façade ornaments and decorations (Çakarcan, 1988).

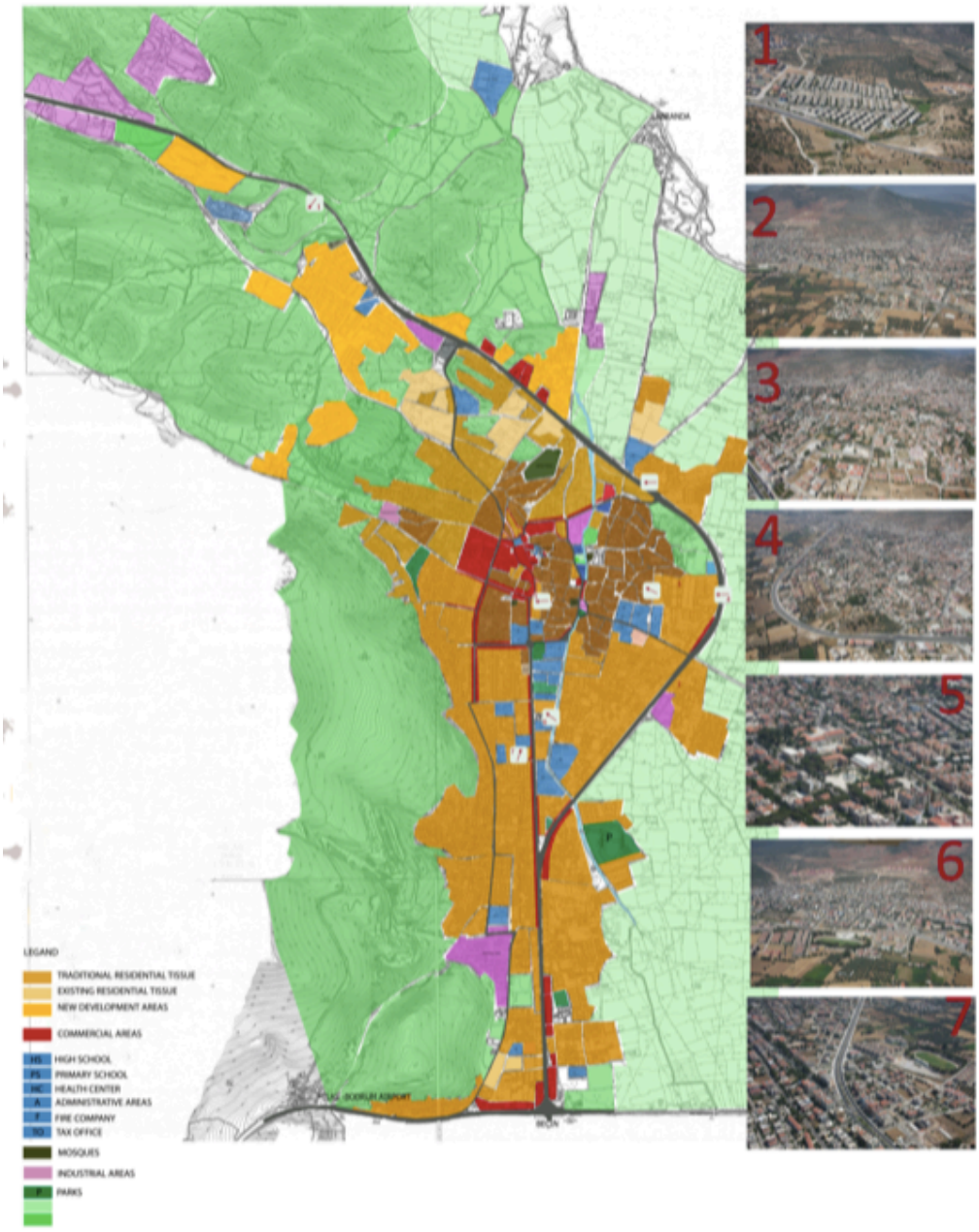


Figure 8 Milas Landuse (METU REST 507-508, 2012)

The use of different colors for painting the houses such as indigo, yellow and red offer more flamboyant and ornamental images compared to the examples in other settlements in the region. Unique and decorative craftsmanship examples are observed on plaster surfaces, windows, doors, railings, shutters, projections and

chimneys. There are remarkable pieces of woodwork and stonework on doors and chimneys, as well as pencil and embroidery work on plaster (Doğanyılmaz, 2000).

Most of the houses belong to the 19th century. Depending on the economic conditions, different examples of western Anatolian Turkish houses can be easily seen in Milas, together with the modest dwellings of middle-class households and the mansions of the wealthier households (Tekin, 2003). In the 18th and 19th centuries, the Rums, Jews, Armenians who lived together with the Turks in Milas, the immigrants who started to come after the withdrawal of the Ottomans from the Balkans, and the Hungarian masters who came upon the invitation of the Milas notables influenced the architecture of the area by building houses that bear their own culture (Akdeniz, 1996).

Today, even if most of the communities living in the region has changed, the area's multicultural social structure remains and still there are housing types reflecting these cultures and lifestyles. Within the residential fabric, there are examples of dwellings that are used by Turks, Rums, Jews, and of owners with different socio-economic status. Besides, as one of the architectural and cultural riches of the built environment, there are examples of Hungarian houses[8] within the fabric (Tekin, 2003). Currently, with these differing examples, there exists a living yet endangered traditional residential fabric in Milas.

[8] Hungarian houses were constructed during late 19th and early 20th century by Hungarian craftsmen who were invited to Milas (Tekin, 2003).

3.2.2 Characteristics of the Traditional Dwellings in Milas

Most of the houses date back to 19th century. Depending on the economic conditions, different examples of western Anatolian Turkish houses can be easily seen in Milas, together with the modest dwellings of middle-class households and the mansions of the wealthier households (Tekin, 2003). While the houses of middle-class households whose livelihood is dependent on the land are closer to and intertwined with the ground, the houses of the wealthy households who do not have a direct relationship with the land are more closed and oriented towards the indoor life for viewing the scenery (Aladağ, 1991).

a. Lot - Building - Open Space

There are lots with differing sizes and forms, and this difference in lots is most evident when the functions of the buildings on them are examined. Accordingly, it is seen that there are public buildings and mansions in large lots, and commercial and residential buildings in small lots. In general, although the lots do not have a regular geometric shape, it can be identified that some small lots have a form close to a rectangle (METU REST 507-508, 2012).

The positioning of the buildings on the lots also varies, and this difference is due to the presence of a courtyard or garden. Accordingly, the buildings can be in front of, behind, on the edge, in the middle or on the whole of the lot. In the early examples where the use of the courtyard and garden was effective, the courtyard is in front of or behind the lot and the entrance to the house is either directly from the street or through the courtyard. On the other hand, in the examples of late periods when the functions of the courtyard were reduced, it is seen that sometimes the courtyard or garden does not exist and the building is positioned on the whole of the lot (METU REST 507-508, 2012).

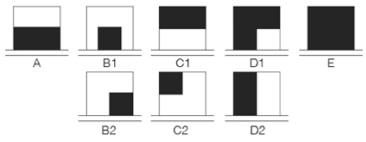
Location on the Lot	A – on the front B – on the front, partially C – on the back D – on one side E – on the whole 

Table 3 Location on the Lot

b. Construction Material and Technique:

Two-storey houses are common, however there are also rare examples of houses with one or three floors or a basement. In general, the structural system is masonry, and the construction materials are stone and brick, but there are also examples of timber framed upper floors. In addition, the use of reinforced concrete is also visible in the buildings repaired or changed after the earthquake in 1957. When analyzed regarding the construction dates, masonry system on all floors or masonry system on the ground floor and timber frame on the upper floor can be observed in the early period examples, whereas masonry system on all floors or masonry system on the ground floor and reinforced concrete on the upper floor can be seen in the late period examples (METU REST 507-508, 2012).

Construction Material and Technique	**ground floor**		**first floor**
	stone masonry	+	stone masonry
	stone masonry	+	timber frame
	stone masonry	+	reinforced concrete

Table 4 Construction Material and Technique

To give detailed information, two-storey houses that make up the majority are generally constructed with stone and timber, as they are the most prominent construction materials available in the region. Ground floor load-bearing walls are

50-60 cm wide stone walls with earth-based mortar, and the first-floor walls with 10-18 cm thick timber frames sit on the ground floor stone masonry walls. Bricks and tiles are used as the mortar joints on the ground floor stone masonry walls, and brick, adobe or pine bark is used as infills in the first-floor timber frame. The inner and outer surfaces of the walls are plastered. In some examples, the ground floor walls on the courtyard side were left unplastered and the joints were covered with lime mortar, using the technique called *çakır sıvak* by the locals (Akarca & Akarca, 1954).

Furthermore, timber or tile is used as floor covering in the interior. When evaluated according to the construction dates, wood is commonly used in the buildings from earlier periods and tile is commonly used in the buildings from later periods (Republican period). Ceilings are generally wooden, and some buildings have ornamented ceilings which are *göbekli* or *kademeli* (METU REST 507-508, 2012).

c. Façade:

Since the region is in a hot climate zone, the houses are oriented to the south in order to benefit from the sun in winter and the breeze in summer, and they open to the courtyard with at least one façade. If the lot faces another direction due to its location, wooden shutters are used on the north-facing side to protect it from the wind (Tekin, 2003). Doors and windows, as the main façade elements that define the interior, are generally in rectangular shape, but in some examples, they have arches and pediments. The main entrance door usually defines the *taşlık* (METU REST 507-508, 2012).

The main entrance to traditional dwellings is usually from the street. Nevertheless, there are also examples where the main entrance is from the courtyard or from the side. When examined according to their construction dates, it is seen that the entrances of the houses from early period are from the street, the courtyard, or the side façade. The entrances of larger scale dwellings are generally located in the middle of the façade. In these examples, there are projections, pediments, or

decorations on the doors. In other respects, the entrance to the buildings from later periods are provided from the street, and the entrances to the buildings that were intervened after the 1957 earthquake are either from the street or from the side (METU REST 507-508, 2012).

The façade layout of the buildings is directly related to the different functions or features of the spaces in the house (Tekin, 2003). Accordingly, the ground floor is either completely closed to the outside or opens to the street with small and few windows. In other respects, the first floor, which is the main floor, has a façade layout with larger and more windows (Tekin, 2003). The courtyard façade, on the other hand, has a more open layout due to the importance given to functionality and reduced privacy concerns. The *önlük* is completely open to the courtyard and carried on with wooden pillars that have ornamented arches in between. The rooms also have windows that open to the *önlük* (Tekin, 2003).

On the street facades, the projections on the first floor, chimney protrusions, and latticed, wooden barred, shuttered windows are important features (Bayazıt et al., 1968). While the shutters are wooden in the early period examples, they are metal in the later periods (METU REST 507-508, 2012). As one of the most characteristic features of the traditional Milas dwellings, chimneys are reflected on the façade as they are protruded and accentuated along their height (METU REST 507-508, 2012; Tekin, 2003).

In accordance with the intended use, there are projections for enjoying the view on the main floor. These projections take shape with the sitting area and can be in differing places and forms. They can be rectangular or triangular in order to preserve the geometrical order, they can be placed in the corners and extended in two directions, or they can be in the rooms or on the façade of the sofa facing the street. While the projections may not exist in the early examples, they have either become more emphasized or turned into balconies over time (Tekin, 2003).

Traditional Milas dwellings are usually yellow or white, but different colors like red, blue or green are also used. On the unpainted examples, the construction technique

and material of the buildings can be identified (METU REST 507-508, 2012). Also, there are examples of pen or embroidery work on the plaster surfaces. Thus, bottom of some of the projections are covered with *eli belinde* or plastered *bagdadi* surfaces. Architectural elements of the building are decorated regarding the economic conditions of the household (Doğanyılmaz, 2000). The houses have gable or hipped roofs with pantiles and wide, wooden, or plastered eaves (Tekin, 2003).

d. Plan Scheme:

Although some features of the houses vary regarding the economic conditions of the household, spatial configuration of the spaces are similar. In general terms, when the floors and spaces are examined according to their functions, the first floor is the main floor as it is used for resting purposes. This floor is at the forefront in terms of receiving enough light, being ventilated and oriented towards the view, therefore it has a decisive role in the spatial organization. Consequently, the ground floor undertakes the task of carrying the first floor. The stone-walled ground floor is a place for daily activities, and it is intertwined with the courtyard. For this reason, there are storage spaces, cellars and *taşlık* on this floor. In close connection with the ground floor, the courtyard is used for service purposes. The kitchen, bathroom and barn were built separately in one corner of the courtyard. In time, these service structures in the courtyard were gathered under a single roof for convenience in use. Also, there is a fountain, well or pool in the courtyard (Tekin, 2003).

To explain in detail, the traditional dwellings consist of two main spaces: the room and the *sofa*. Common spaces called *sofa* on the first floor are called *taşlık* on the ground floor, which is directly related to the courtyard. The use of the *sofa* plays a decisive role in its size. While large-scale *sofa*s are used as living spaces, narrow *sofa*s are used for indoor circulation. The *sofa,* which is located on the first floor and used as a living space in the buildings of the early period, is wide and open and located on either one side or corner of the building. On the contrary, in the late period buildings, the sofa used as a circulation area is narrow and closed and has no relation

with the courtyard as it is in the middle of the building. As mentioned, the rooms on the first floor are often used as living spaces. However, it is known that the use of spaces on the ground floor has changed over time. While there are rooms used as *yağlık*, storage and barn on the ground floor in the dwellings of early period, the use of living space or kitchen on the ground floor is also seen in the dwellings of later periods (METU REST 507-508, 2012).

Due to the favorable climate, the open sofa, which exists in most of the traditional dwellings in Milas and opens to the courtyard with at least one side, is called *önlük* in the local language. With the development of plan types with open sofas, the sofa between the rooms and opening to the courtyard forms a *divanhane* (Akarca & Akarca, 1954). The development stages of traditional Milas dwellings are examined according to the changes in main floor plans since the spatial configuration is determined in reference to this floor. This change in the plan type over time was mainly due to the increase in number of rooms, and the congruent relations of the rooms with each other and with the common area.

For the development of the plan type, the schema that Tekin (2003) created, based on the room-*sofa* relationship, was used. Basically, these schemes developed with the formation of *eyvan*s and private sitting areas. To elaborate, the simplest plan type among traditional houses consists of a room and a sofa. In this plan type, it is possible to see that more than one room can be positioned adjacent to the *önlük.* In the development process of the plan schemes, it is seen that the common area extends and expands between the rooms. Thus, *eyvan*s, which are sitting areas, and *sofa köşkü* were formed as a result of the projections of the *eyvan*s. With the addition of a third room to this plan, the 'L' type *önlük* plan was formed. Later, with the addition of a fourth room, the *sofa* was closed on both sides, becoming a *divanhane.* As a result of the further development of this plan type, the *divanhane* could be privatized and ended with an *önlük*-like open area on the courtyard side (Tekin, 2003).

3.3 Understanding Today's Traditional Residential Fabric and Traditional Dwellings in Milas

Today's traditional residential fabric of Milas was studied within the scope of literature survey and today's traditional dwellings in Milas were examined through the site research. In this section, the collected data will be explained.

3.3.1 Today's Residential Fabric in Milas

Milas is a multilayered settlement with a living, yet endangered, traditional residential urban fabric, where traditional dwellings are still mostly in use but confronted with a constantly rising threat of abandonment. Although the traditional residential buildings of Milas constitute important sources of information, conservation or even documentation of these buildings are not sufficient.

In the central district of Milas, which has been one of the important settlements since early times, the settlement pattern of the Turkish period has developed on the ruins of the previous period, depending on its own characteristics. Located in the middle of the city, Hisarbaşı Hill is the oldest residential area. From here, the city spread to the plain in the South and the hills in the North, East and West directions (Akarca & Akarca, 1954). Although it is possible to come across examples of traditional Milas houses within the city, the traditional urban fabric is particularly developed in Hisarbaşı, Hoca Bedrettin and Firuz Paşa Neighborhoods (Çakarcan, 1988). It is possible to see the traces of Ottoman period and the building pattern in these neighborhoods with different examples of residential, commercial, and monumental structures, especially in Hisarbaşı-Hoca Bedrettin Neighborhood (Usta, 2018).

Figure 9 Study Area - City Scale (basemap from: yandexmaps.com)

Within the scope of this thesis, a study area has been identified, which is a part of the Hisarbaşı-Hoca Bedrettin Neighborhood. As one of the oldest neighborhoods in Milas, Hisarbaşı Neighborhood is located at the center of the city, on the Hisarbaşı Hill. The importance of the district, where many influential families had houses during the Ottoman period, dates to antiquity. The neighborhood stands out as an historic fabric with archaeological remains, traditional dwellings, and Ottoman period buildings, streets, and commercial area (Usta, 2018).

With the reorganizations, Hisarbaşı Neighborhood was merged with the Hoca Bedrettin Neighborhood in 2008 and this district came to be known as the 'Hisarbaşı-Hoca Bedrettin Neighborhood'. Regarding the data from 2021, there are 596 people living in this neighborhood. Although the population of Milas is increasing over the years, the population of Hisarbaşı-Hoca Bedrettin Neighborhood has been in decline since 2008 (TÜİK, 2022).

Table 5 Hisarbaşı - Hoca Bedrettin Neighborhood Population (2008- 2021) (TUIK, 2022)

	Hisarbaşı - Hoca Bedrettin Neighborhood	Milas
2008	908	50141
2009	861	50975
2010	821	52522
2011	741	54068
2012	733	55348
2013	715	129128
2014	688	132445
2015	660	132437
2016	650	134774
2017	642	136162
2018	608	139446
2019	613	141107
2020	615	143254
2021	596	145275

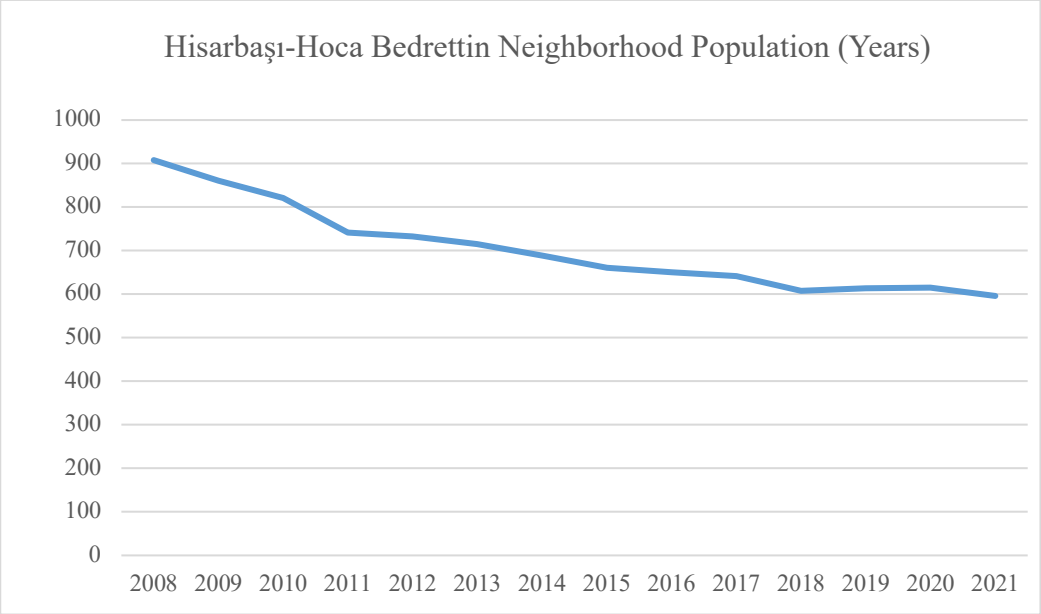


Figure 10 Hisarbaşı - Hoca Bedrettin Neighborhood Population (2008- 2021) (TUIK, 2022)

In addition to its importance with the traditional urban fabric with commercial and residential areas, Hisarbaşı-Hoca Bedrettin Neighborhood is a district that has begun to transform with the current developments. To elaborate, there is a change in the region due to the discovery and excavations of the Uzunyuva Hecatomnos Mausoleum. Around this area, there is still a living residential fabric in the center of the city. Within the scope of this study, the focus is on the traditional residential fabric, primarily in the south of Tabakhane Street, which is intertwined with the commercial area of the city and formerly known as the Jewish Neighborhood. Although not limited to the neighborhood, some dwellings located on the periphery of the main study area were also included in the study, within the possibilities.

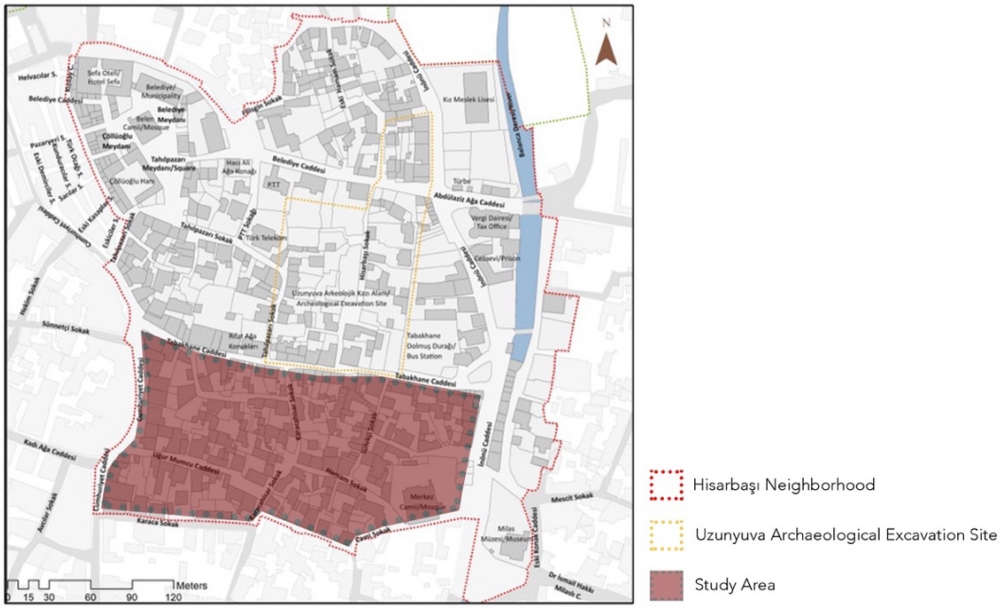


Figure 11 Study Area - Neighborhood Scale (basemap from: METU REST 507-508, 2012)

3.3.2 Today's Traditional Dwellings in Milas and Their Users: Site Research

Within the scope of this thesis, interviews were held with the users of the traditional dwellings in the study area to understand the physical, sociocultural, and economic context of both the study area and the traditional dwellings, and to identify the user needs, expectations and thoughts regarding these contexts and scales. Accordingly, 17 traditional dwellings and their users were studied.

In this section, the collected data on traditional dwellings and users are presented separately for each case through 4 main subcategories as (a) physical features, (b) made interventions, (c) spatial and thermal comfort conditions, and (d) desired interventions.

Figure 12 Studied Houses

Case #1 – *Interview with **U1** (F, 68), homemaker born in Pınarcık, Milas.*

Figure 13 Case #1 House - Street Facade

This building was originally constructed as a residence and is still used for the same function. U1 have been living in this house for 50 years. When she got married and moved to Milas from Pınarcık, she started to live here with her mother-in-law. This house, which is estimated to be over 100 years old, was bought by her husband's family from a Hungarian person. Currently, one person lives in this house.

a. Physical Features

The building is located on the front of the lot, partially. The entrance to the house is directly from the street. The entrance door is in the middle of the street façade, and it opens to a long narrow sofa surrounded by 4 rooms. The second room on the right

is currently refunctioned as kitchen, and the others are used as living rooms. The door at the end of the sofa leads to a space that was added later. In this area, there is a sink and a bathroom. From this space, you can access the courtyard. The courtyard is partially covered with pergola.

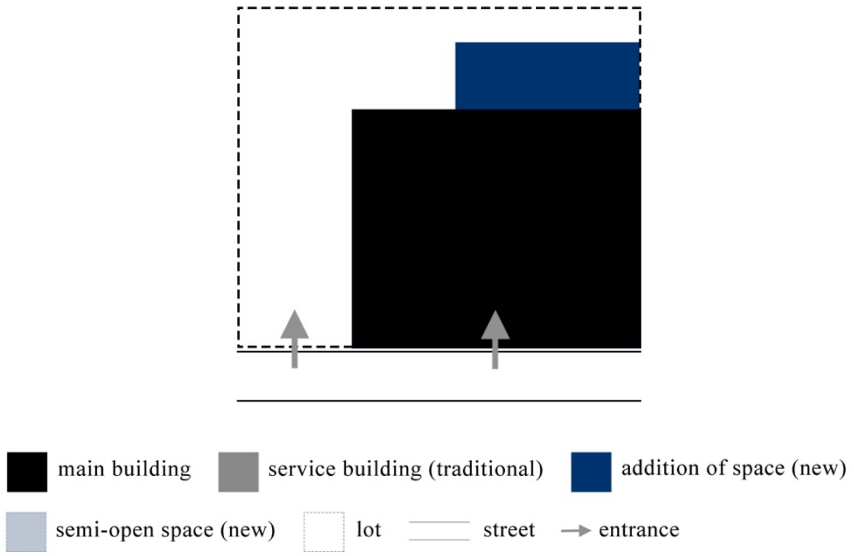


Figure 14 Case #1 House - Organization of the Buildings on the Lot

Figure 15 Case #1 House - Ground Floor - Sofa

Figure 16 Case #1 House - Ground Floor - Kitchen and Bathroom

Figure 17 Case #1 House - Ground Floor - Rooms

The upper floor can be accessed through the stairs on the right side of the sofa, between the two rooms. There is an 'L' type sofa on the upper floor, and a *divanhane* at the other end of the sofa. On this floor, there are three rooms and a bathroom. While two of the rooms are used as bedrooms, one is used as storage. There is an *ocak* in the bedroom across the stairs.

Figure 18 Case #1 House - First Floor - Staircase and Sofa

Figure 19 Case #1 House - First Floor - Rooms and Bathroom

Overall, it is a two-storey plastered and painted (blue) building with stone masonry ground floor and timber framed upper floor walls. The added space on the ground floor, consisting of a sink and bathroom was constructed with reinforced concrete. Also, there is a projection in the middle of the street façade.

b. Made Interventions

It is learned that minor repairs were made every year. Most importantly, a restoration work was done in the house 4 years ago. During this period:

- All the timber elements (doors, windows, floors, and ceilings) in the building were renewed,
- Roof was retiled,
- A room on the ground floor was refunctioned as kitchen,
- Flooring (timber) of the space that is currently used as kitchen was changed with tiles,
- Bathroom was added to the courtyard, adjacent to the building. The upper floor of this space was planned to be a terrace and a door was added on the upper floor (for access from inside the house), but the construction of the terrace has not been completed,
- Courtyard gate was renewed.

This house was visited twice since U1 moved elsewhere a few months after the interview. In the meantime, her son and his family started to renovate the house to settle in. Accordingly, certain changes were made. On the ground floor, the area added for the bathroom has been expanded and the terrace above was completed. The two rooms (on the left) on the ground floor were merged to create a single spacious living room. The kitchen has been renewed.

c. Spatial and Thermal Comfort Conditions

In winter, air conditioning and catalytic stoves are used for heating. The house is partially heated. To provide thermal insulation between the two floors, they use an electric shutter they have installed at the beginning of the staircase. In the coldest period of the year, she moves to Istanbul to live with her children for 1.5-2 months. A few years ago, during the renovation of the house, heating pipes were installed in the building. Due to costs and heating performance, she is considering using a heat pump or solid fuel.

In summer, air conditioning is used for cooling off. Currently, there are two air conditioners in the house, in the rooms that are located both sides of the entrance. However, she is planning on using air conditioning in all rooms on the ground floor and ceiling fans on the upper floor.

Overall, she believes that her house cools easily in summer, but it becomes uncomfortable in winter especially for two months in total, which are January and February when the weather becomes the coldest. She thinks that the rooms get enough light, and the ventilation is sufficient. However, she stated that there is a dampness problem on the walls adjacent to the street, which began after the renovation. Also, she thinks that the number of spaces in their house is adequate.

Figure 20 Case #1 House - Ground Floor Walls and Shutter

d. Desired Interventions

U1 stated that if given the opportunity, she would want to change the guillotine style windows due to the difficulty of use. Also, she would want to use natural gas for heating.

Case #2 - *Interview with **U2** (F, 60), homemaker born in Milas.*

Figure 21 Case #2 House - Street Facade

This building was originally constructed as a residence and is still used for the same function. It belonged to U2's father and was constructed by her father's grandfather. Therefore, this building is estimated to be 150-200 years old. U2 grew up in this house but moved out after her marriage. Later, U2 and her husband decided to renovate this house and live here. They have been living in this house for 3 years. Currently, 2 people live in this house.

a. Physical Features

The main building is positioned on the front of the lot, partially. Although, it has an entrance directly from the street, the users enter the house from the courtyard. The size and place of the original main entrance on the street façade was changed.

Currently, it is in the middle of the street façade. Since the house is located on a busy street, they use the courtyard entrance.

Figure 22 Case #2 House - Organization of the Buildings on the Lot

When entered the courtyard, the main building is located on the right side. There is a platform-like space in front of the main building, which is covered with an extension to the roof and organized as a sitting place. At the left side of this space, there is an additional space adjacent to the main building, which is used as the bedroom.

The main building has two entrances from the courtyard. One of these entrances open to the sofa on the ground floor. The room on the left is used as the living room, whereas the one on the right was refunctioned as kitchen. There is an *ocak* in the living room. The other entrance from the courtyard opens directly to the kitchen. Upstairs can be accessed through the staircase located in the sofa.

Figure 23 Case #2 House - Courtyard

Figure 24 Case #2 House - Ground Floor - Living Room and Kitchen

Figure 25 Case #2 House - Staircase

On the upper floor, there are two projections in the sofa, and it is possible to see the authentic shutters. There are two rooms on both sides of the sofa. It is learned that they used to be bedrooms, but today the one on the left is used as a living room and the one on the right is used as a bedroom. There is also a *gusulhane* in this bedroom, which is still used as a bathroom with a recently installed European-style toilet.

Figure 26 Case #2 House - Courtyard Facade - Projections

Figure 27 Case #2 House - First Floor - Sofa and Projections

Figure 28 Case #2 House - First Floor - Room and *Gusulhane*

Overall, it is a two-storey plastered and painted (yellow) house with stone masonry ground floor and timber framed upper floor walls. Also, it has two projections, one on the street and one on the courtyard façade. The added bedroom on the ground floor was constructed with reinforced concrete.

b. Made Interventions

It is learned that minor repairs were made every year. Also, they have renovated the house 4 years ago. Overall, the changes are as follows:

- The size and location of the main entrance on the street façade was changed,
- Floorings and ceilings on both floors were renewed,
- Roof was renewed,
- Timber elements of windows and doors were renewed,
- A room on the ground floor was refunctioned as kitchen, and it was renewed,
- Plumbing system, a sink and a European-style toilet were installed inside the *gusulhane*,
- A bedroom was added,
- Courtyard gate was renewed.

c. Spatial and Thermal Comfort Conditions

In winter, rooms are heated as they are used. Two stoves (one in the kitchen and one in the living room) are used for heating. The stoves are lit throughout the day. When the weather gets too cold at nights, they use the air conditioner in their bedroom. Also, they use a curtain (membrane) at the beginning of the staircase for thermal insulation.

In summer, they spend most of their time in the courtyard. However, when the weather gets too hot, they use the air conditioner in their bedroom and kitchen for cooling off. Sometimes they even use the air conditioner during the entire night.

U2 thinks that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

She thinks that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

If given the opportunity they indicated that they would change the timber elements of the windows and doors to pvc due to cleaning and thermal insulation purposes, and they would convert the *ocak* into a fireplace and use natural gas for heating. Also, they would like to change a part of their courtyard wall, which they believe lost its authenticity and characteristics during the renovations that took place 4 years ago.

Case #3 - *Interview with **U3** (F, 72), homemaker born in Mumcular, Bodrum.*

Figure 29 Case #3 House - Street Facade

This building was originally constructed as a residence and is still used for the same function. 49 years ago, U3 got married and moved to Milas from Bodrum. After staying in different places, 26 years ago, U3 and her husband bought this house and started living here. It is known that this house was constructed by the former mayor Nazmi Akdeniz, and it is estimated to be over 100 years old. Unfortunately, U3's husband has passed away and currently, one person lives in this house.

a. Physical Features

The building is positioned on one side of the lot. The entrance to the house is directly from the street. The entrance door opens to the sofa. On the right side, there is a living room. There is a kitchen and a courtyard door to the left, respectively. At the end of the kitchen, there is a bathroom. The upper floor can be accessed through the stairs in the sofa. On the upper floor, there is a sofa surrounded by two bedrooms on

each side. The courtyard can be accessed through the sofa on the ground floor, and it is partially covered.

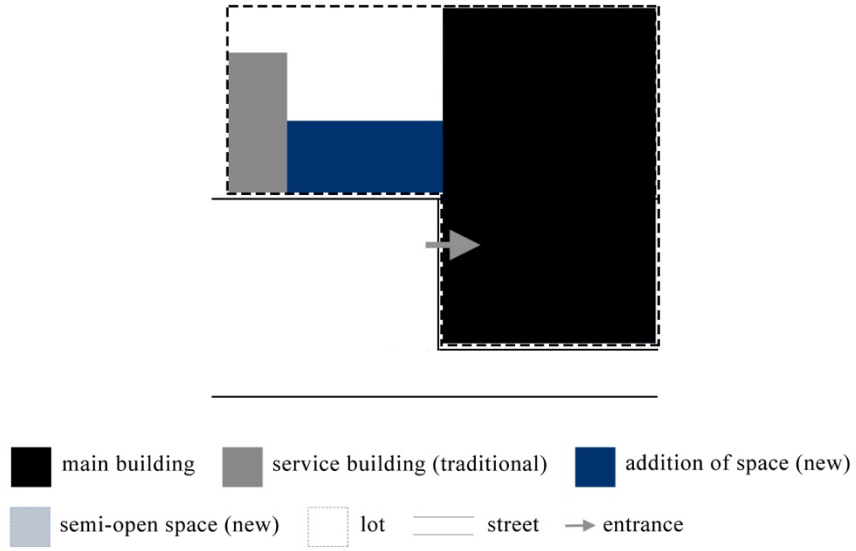


Figure 30 Case #3 House - Organization of the Buildings on the Lot

Figure 31 Case #3 House - Courtyard and Living Room

Overall, it is a two-storey plastered and painted (pink and grey) house with stone masonry ground floor and timber framed upper floor walls. The kitchen and bathroom were constructed with reinforced concrete. The service building on the courtyard, which is used as storage, was constructed with clay brick.

b. Made Interventions

It is learned that minor repairs were made every year. Also, the interventions made to the building are as follows:

- Roof tiles were renewed (7-8 years ago),
- Walls (both interior and exterior) were plastered and painted (7-8 years ago),
- Damaged and old timber elements of the windows and doors were renewed (7-8 years ago),
- Ceilings and floorings were renewed (7-8 years ago),
- Kitchen and bathroom were added (date unknown), and renewed later (7-8 years ago),
- Courtyard was partially covered.

c. Spatial and Thermal Comfort Conditions

In winter, she uses a stove (wood) in the kitchen. Previously, they used to have another stove in the living room as well. However, she began to use only one of the stoves due to her age. Also, when the weather gets too cold, she uses the air conditioners in the kitchen and the living room.

In summer, she spends most of her time in the courtyard and often uses the air conditioner. However, when the weather gets too hot, she uses the air conditioner in the living room and sleeps there at night while it is on.

U3 thinks that the rooms get enough light, and the ventilation is sufficient. However, she has dampness problem at the bottom parts of the ground floor walls.

She thinks that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

U3 indicated that she has difficulty in heating the house, for this reason she wants to be able use natural gas for heating.

Case #4 - *Interview with **U4** (F, 70), retired teacher born in Milas*.

Figure 32 Case #4 House - Street Facade

This building was originally constructed as a residence and is still used for the same function. It was bought by the father of U4 from the Jews in 1969. Since there were people living in the building at the time they bought, they could begin to use it two years later in 1971. In this building, which is estimated to be about 150 - 200 years old, a woman named Hatice lived before the Jews. During that period, it is known that this house was used by two families. The current spatial organization of the house was shaped by the Jewish owners.

U4 lived in this house with her mother, father and two sisters from 1971 until her marriage in 1975. After getting married, she moved to an apartment in Milas to live with her husband. After the loss of her mother in 2004, she moved back to this house to take care of her father who was living on his own. However, her husband continued to live in their apartment. In 2020, with the pandemic, her husband moved in with them. Currently 3 people (U4, her husband and her father) live in this house.

a. Physical Features

The main building is located on one side of the lot. The entrance to the house from the street is through the courtyard. There are two buildings on both sides of the courtyard, facing each other. The building on the left is the main building and the other one on the right is the service building.

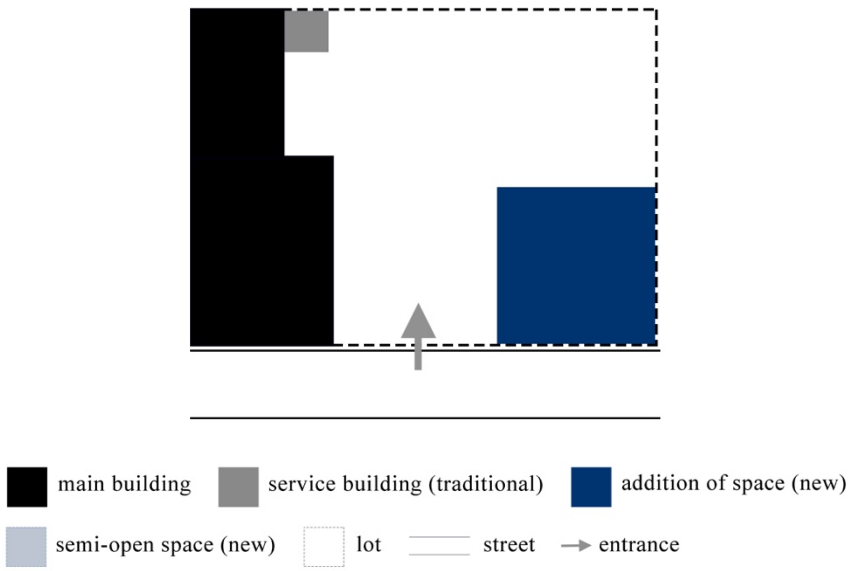


Figure 33 Case #4 House - Organization of the Buildings on the Lot

Figure 34 Case #4 House - Courtyard Entrance and Courtyard

Main building has a bedroom, a dining room, a kitchen, a storage and a bathroom on the ground floor, and two interconnecting rooms (a bedroom and a storage) on the upper floor. These two rooms on the upper floor were previously used as bedrooms, but as the users needed a space to keep their belongings, one of the rooms (facing the street) was refunctioned as storage. It is possible to access the upper floor through a wooden staircase located outside the main building. There is also an outer circulation space and a bridge connecting the upper floors of the two buildings (main and service buildings), which was present at the time they moved to this house.

Figure 35 Case #4 House - Main Building - Street Facade and Courtyard Facade

The service building consists of a single room. This room, which was used as a guest room, is currently used as a bedroom. Upper floor of this building is used as a terrace. It is learned that they used to sleep in the terrace in summertime, under the bednet set up by U4's mother.

Figure 36 Case #4 House - Service Building - Street Facade and Courtyard Facade

There is another structure in the courtyard adjacent to the bathroom in the main building, which was originally the bathroom but currently used as a henhouse. Also, there is an elevated space covered with a pergola, where they spend most of their time when the weather gets warm.

Figure 37 Case #4 House - Courtyard

Overall, the main building is a plastered and painted (white) two-storey building with stone masonry ground floor and timber framed upper floor walls. The original bathroom, which is currently used as the henhouse, has stone masonry walls as well. The service building is a plastered and painted (white) single storey reinforced concrete building with a terrace.

b. Made Interventions

It is learned that minor repairs were made every year. Also, they paint and whitewash the house every 4-5 years, and retile the roof every 1-2 years since the cats roam a lot. Apart from these, the interventions made to the buildings are as follows:

- Damaged timber elements of windows and doors were renewed,
- Roof was retiled,
- One of the spaces on the ground floor was refunctioned as kitchen,
- Bathroom floor was covered with tiles, and a European-style toilet has been installed (29 years ago),
- The additional room in the courtyard was added (date unknown) and renovated later (19 years ago) since it was damaged due to the rains,
- Courtyard gate was renewed (15-20 years ago),
- Ceiling of the kitchen was rebuilt due to leakage problem (15 years ago),
- A door (pvc) to the entrance of the storage space between the bathroom and the kitchen was added (3 years ago),
- The pergola (metal) was renewed by a carpenter. Previously, it was maintained and repaired with used timber elements and fountain irons by her father (3 years ago),
- The bridge was renovated (a year ago).

c. Spatial and Thermal Comfort Conditions

In winter, rooms are heated as they are used. Electric heater is used for heating. A stick of the electric heater in her fathers' room remains on 24 hours a day. This year, they used an electric radiator in the service building, but they stopped using it since the expense in the bill increased a lot. They don't use anything to cool off in the summer since they spend most of their time in the courtyard. They installed an air conditioner this year, but they did not use it much due to her fathers' sickness. Overall, they believe that their house cools easily in summer and warms easily in winter, but it becomes uncomfortable for two months in total, which are January and

February when the weather becomes the coldest. In those two months, their electric bill used to be 1000 ₺, but this year they've paid 4000 ₺ due to price rise.

She thinks that the rooms get enough light, except the kitchen and the dining room. Also, she believes that the ventilation is sufficient. However, she stated that there is a dampness problem on the walls adjacent to the street, which began after the road construction.

She thinks that the number of rooms/spaces in their house is adequate, but it would be nice to have one more room for the guests since they have started to use their guest room as a bedroom during the pandemic.

d. Desired Interventions

U4 indicated their desired changes and interventions as such:

- They want to renew the damaged timber elements of windows and doors,
- Her family wants to cover the *çanaklık* (cupboard) in the dining room, but she wants to keep it as it is since she finds it practical and authentic,
- She wants to cover the kitchen and storage space (ground floor) floors with tiles. However, she states that she does not have the strength (physical) and time for this,
- She wants to cover the area under the pergola with glass in order to use it in the winter as well. However, her children object to this by saying that 'this is the only place where we can get some air'.

Case #5 - *Interview with **U5** (F, 69), retired pharmacist born in Milas.*

Figure 38 Case #5 House - Street Facade

This building, which was originally constructed as a residence, is still used for the same function. U5 was born in the building (Emin Ağa Mansion) currently used as the museum at the entrance of the Uzunyuva - Hecatomnos Mausoleum. Later, her father bought a land from this neighborhood and built this house in 1957. She explains it as:

'My mother's family is a principality dynasty from Selimiye region. There was also a principality dynasty here. Principalities used to take brides from other principalities. My grandmother's family came here as a bride. The building that I was born in was my mother's great uncle's house. We divided it as heirs, so it wasn't completely ours. Back then, that building was not called mansion, we used to call it house. The term mansion has recently come out. Such big houses were just crowded houses with assistants. The building right next to ours was my aunt's house. My other aunt owned a house there as well. We used to live here, in this neighborhood, as a

family. The state bought our houses by giving their due, and then they began the excavations'.[9]

U5 studied middle, high school and university in Izmir, then she moved to Yalova. 10 years ago, she came back to Milas with her husband and moved to this house to live with her mother. At the time they've moved here, her mother was living upstairs with her caregivers. U5 and her husband began to use downstairs and in a very short period, they have made some renovations to settle in. Currently 2 people (U5 and her husband) live in this house.

a. Physical Features

The building is located on one side of the lot. The entrance to the house is directly from the street, through three stairs. When you enter the house, you directly enter the sofa. There are 3 rooms and a kitchen on the ground floor. The first room on the right side of the sofa is used as the living room. Just across the living room, the first room on the left side of the sofa is the bedroom. The room right next to the bedroom is used as the guest room.

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[9] *'Annemin sülalesi bir beylik sülalesi, Selimiye tarafından. Burada da bir beylik sülalesi var. Beylikler beyliklerden kız alır. Anneannemin sülalesi komple buralara gelin gelmişler. Annemin büyük dayısının evi aslında (Uzunyuva'daki) doğduğum bina. Mirasçılar olarak bölüştük, yani direkt bizim değildi. O zaman o binalara konak denmezdi, ev derdik. Yeni çıktı konak adı. Böyle büyük evler, yardımcılı kalabalık evlerdi. Onun yanındaki (Hekatomnos Mezarı'nın üstü) teyzemin eviydi. Halamın da evi vardı. Burada, bu mahallede aile olarak otururduk. Evleri, devlet hakkını vererek aldı ve altını kazdı'* (translated by the author).

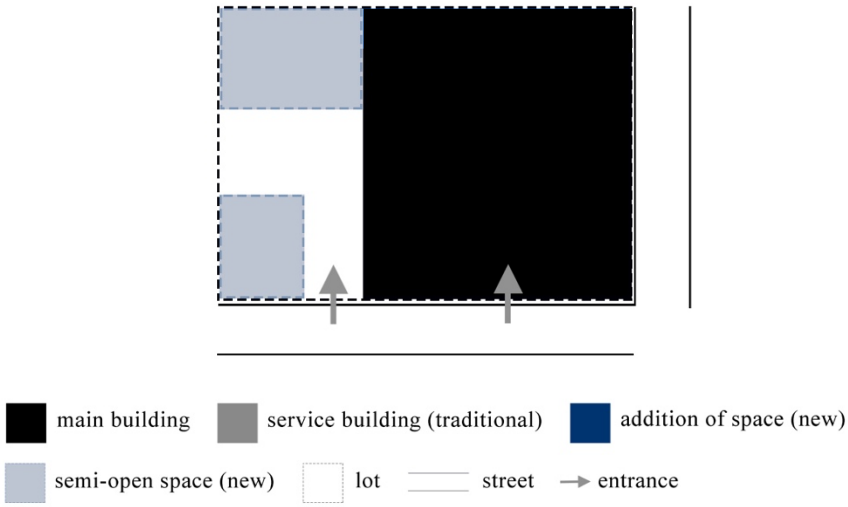

Figure 39 Case #5 House - Organization of the Buildings on the Lot

Figure 40 Case #5 House - Ground Floor (sofa and living room)

Figure 41 Case #5 House - Ground Floor (sofa and kitchen)

There is a door right across the entrance, at the back of the sofa, which opens to a corridor that continues from one end of the building to the other. On the left end of the corridor, there is another door which opens to a semi-open space in the courtyard. Apart from this space, there is also another semi-open space in the courtyard which is constructed with reinforced concrete and organized as a sitting area. Although the courtyard is visible and accessible from the street, they use the door inside the house to reach the courtyard.

The upper floor is a separate flat with a different entrance. They own the upper floor as well, but do not use often. It is cleaned once or twice a year. When they have overnight guests, they use upstairs just to sleep. On the upper floor, there is a sofa surrounded by four rooms, and a terrace.

Figure 42 Case #5 House - Courtyard

Figure 43 Case #5 House - Semi-open Space and Terrace Addition

Overall, it is a plastered and painted (yellow) two-storey building with stone masonry ground floor and timber frame upper floor. There is a balcony on the street façade. The corridor accessed through the door located at the end of the sofa on the ground

floor and the semi-open space at the end of this corridor was constructed later with reinforced concrete.

b. Made Interventions

It is learned that minor repairs were made every year. Also, they paint the house every 4-5 years. Apart from these, U5 stated that she had some changes and renovations done that she later regretted. When they returned to Milas 10 years ago, they hurriedly made the renovations to settle in the house as quickly as possible. These changes were as follows:

- Water and electrical installations were renewed.
- The authentic tiles on the floor were replaced with new ones so that she would be able to have the floor washed. However, she regrets her choice of tiles and thinks that she should have picked another style similar to the authentic one.
- A semi-open space was added on the courtyard,
- Iron bars were installed on the ground floor windows.

c. Spatial and Thermal Comfort Conditions

In winter, they heat the living room and the room(s) they use. In total, they use 3-4 air conditioners for heating the house. However, they hardly use air conditioner in summer. U5 indicates that the stone walls are an advantage when the weather gets warm. Overall, she believes that heating the house is difficult therefore the house becomes uncomfortable in winter. This year, they have paid approximately 1000-1500 ₺ for the electricity, and they are waiting for the natural gas infrastructure to be established so that they can start using it.

U5 thinks that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house and she believes that this is because elderly knew where and how to build a house.

She thinks that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

When asked about her desired changes, U5 indicated that since this house is joint property with her brother, she does not want to make changes without his permission. However, her desired changes and interventions are as follows:

- At the time they have moved to this house and while these renovations were being made, her mother was living upstairs. Therefore, she could not touch the upper floor, but now she wants to overhaul it.
- She is waiting for the natural gas infrastructure to be established so that they can start using it for heating.

Case #6 - *Interview with **U6** (M, 65), musician born in Milas.*

Figure 44 Case #6 House - Street Facade

This building was originally used as a barn. However, it was refunctioned as a residence before U6's family has moved here. Although the exact construction date of the building is unknown, it is known that the previous owners of the house died 50 years ago at the age of 90, and he and his father were born in this house.

U6 was born and raised in this house as well. He continued living here after his marriage with his former wife (65, homemaker) and their 4 children. As they got

divorced, U6 moved to an apartment in Milas. Currently, his former wife and their youngest daughter (29) lives in this house and U6 visits them every day.

a. Physical Features

The building is located on one side of the lot. The entrance to the house is through the courtyard. There are two buildings on both sides of the courtyard. The courtyard is small and mainly used as a passage between these two buildings. The building on the right is the service building, which is used as the bathroom.

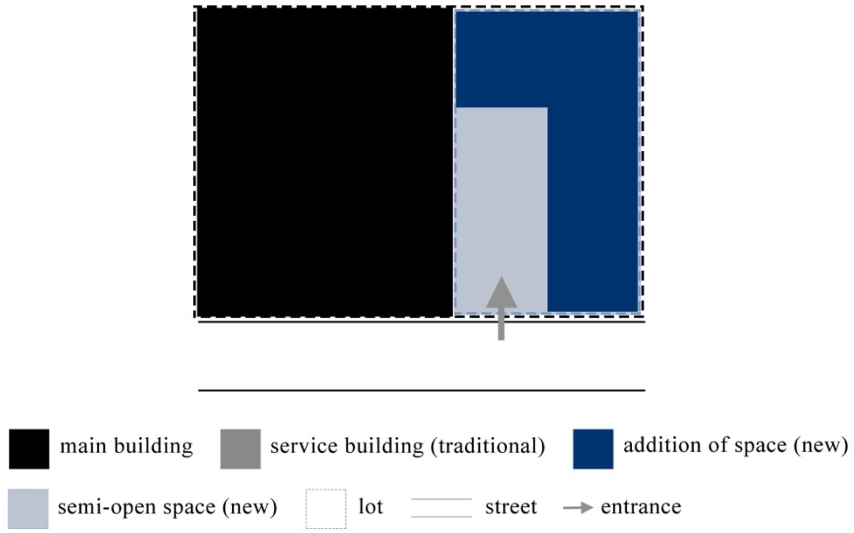

Figure 45 Case #6 House - Organization of the Buildings on the Lot

Figure 46 Case #6 House - Courtyard


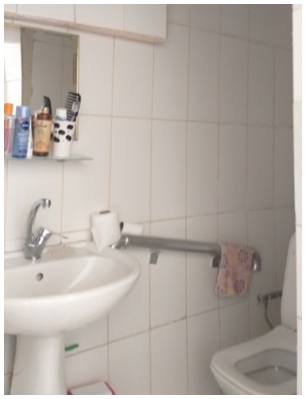

Figure 47 Case #6 House - Courtyard and Kitchen

The building on the left is the main building with separate entrances for each floor. The ground floor of the house is entered through a recessed window-like entrance. Currently, there is a kitchen and a room (storage) on the ground floor, however it is learned that this floor was originally functioned as a barn.



Figure 48 Case #6 House - Ground Floor

Upper floor of the main building, which is the living space, is entered through a staircase (facing the courtyard door) from the courtyard. There is a closed corner sofa, a bedroom, and a living room on this floor.

Figure 49 Case #6 House - First Floor

Overall, the main building is a plastered and painted (white) two-storey building with stone masonry ground floor, and timber frame and stone masonry upper floor walls. The service building consisting of a bathroom and terrace was constructed later with reinforced concrete.

b. Made Interventions

It is learned that minor repairs were made every year.

- Material and size of the entrance door on the ground floor was changed,
- Material of the living room ceiling was changed,
- Roof was retiled,
- A timber-patterned membrane/linoleum is laid on the living room floor, on top of the original timbers, because of the gaps between the timber elements (in 1988),
- *Ocak* (in the living room) was installed after they have moved to this house. However, they covered it in 1976 since the chimney was damaged, and rain got inside the house,

- *Gusülhane* (in the living room) was in use when U6 was a child, but later it was converted into a closet,
- There used to be an *elmalık* in the living room but was removed in 1976 since they did not use it,
- Bathroom was built in a separate building in the courtyard, and it is renewed every 3-5 years. It was last done in 2018,
- The function of the ground floor (barn) was changed. One of the spaces was refunctioned as kitchen and the other as storage. Kitchen was built in 2018. Before that, the stove was outside and there was no place to wash the dishes,
- Terrace was built 60 years ago,
- Courtyard (including the terrace) was covered with a reinforced concrete structure,
- Courtyard gate was changed, currently there is an iron gate.

c. Spatial and Thermal Comfort Conditions

They used to heat the house with olive pomace and solid fuel. As they got older, it became harder to cut wood or carry coal, so they switched to heating with air conditioners. They use single air conditioner in the living room to heat the entire house. However, since the weather was colder this year, they used an electric heater in the living room, in addition to the air conditioner.

In summer, they usually cool off by opening the doors and windows, but they turn on the air conditioner when the weather gets very hot.

Overall, they believe that both summer and winter have their disadvantages in terms of thermal comfort, therefore they cannot distinguish in which season their house becomes more uncomfortable. Nevertheless, they believe that they have the most difficulty in winter due to the high expenses for heating. Last winter, they have paid approximately 450 ₺ for the electricity, whereas this winter they have paid approximately 1500 ₺.

U6 thinks that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

He thinks that the number of rooms/spaces in their house is adequate, but it would be nice to have one more room for their daughter as she needs a place to study.

d. Desired Interventions

U6 defines this house as their ‘temple’. No family member, including his daughters, wants the house to be changed because they fear that the authenticity of the house will be damaged. However, they state that they have certain needs which require change:

- Renewing timber elements of the windows, doors, and stairs,
- Renewing the ceilings and floors due to dust and level difference problems,
- Strengthening the terrace.
-

Figure 50 Case #6 House - First Floor - Living Room

Case #7 - *Interview with **U7** (F, 60), homemaker born in Milas.*

Figure 51 Case #7 House - Courtyard Facade

This building was originally constructed as a residence and is still used for the same function. U7's family has bought this house 50 years ago, when she was 10 years old. Although they do not know neither the previous owners nor the exact construction date of the house, they believe that this building is more than 100 years old. U7 grew up in this house with her siblings until they each got married and left. Unfortunately, they have lost their father 4 years ago. Currently, her mother (80) lives here by herself.

a. Physical Features

The building is located on the back of the lot. The entrance to the house is through the courtyard. The courtyard is surrounded by buildings with differing functions. The building facing the courtyard gate is the main building. In the main building, there is

a room on the ground floor (living room), and a room and an *önlük* on the upper floor. Access to the upper floor is through a staircase from the courtyard.

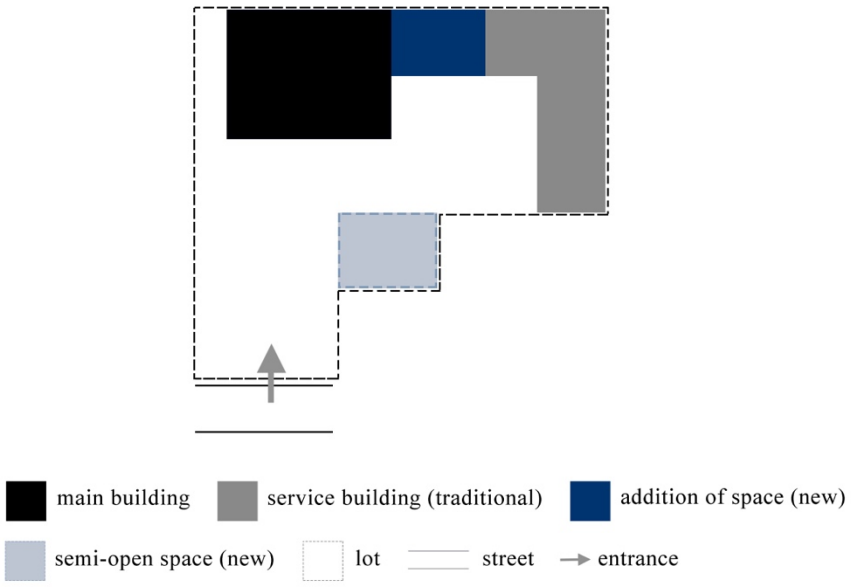

Figure 52 Case #7 House - Organization of the Buildings on the Lot

Figure 53 Case #7 House - Courtyard

Next to the main building, there is a kitchen, a cellar, and a room, respectively. Also, there is a semi-open space with an *ocak*, across the kitchen. These service buildings each have their own entrances from the courtyard. The courtyard is partially covered.

Figure 54 Case #7 House - Service Buildings

Overall, the main building is a two-storey plastered and painted (white) house with stone masonry ground floor and timber framed upper floor walls. The *önlük* on the upper floor forms a total projection on the courtyard façade. The service buildings are painted (white) single storey stone masonry structures. The semi-open space with an *ocak* was constructed later with reinforced concrete.

b. Made Interventions

It is learned that minor repairs were made every year. However, the major changes are as follows:

- Roof was retiled,
- *Kafes* and arches on the *önlük* were removed since the timber elements were old and in poor condition (50 years ago),
- The separate single room opening to the courtyard used to be a barn, but they have converted it into a room,
- The cellar opening to the courtyard used to be the kitchen with an *ocak*, which currently remains but is not in use,
- Kitchen in the courtyard was constructed with reinforced concrete,
- A semi-open space was created,
- Courtyard was partially covered,
- Courtyard gate was renewed.

c. Spatial and Thermal Comfort Conditions

In winter, they partially heat the house. They use a stove (coal and wood) for heating. In summer, they do not use anything for cooling off. They spend most of their time in the courtyard when the weather gets warm.

U7 thinks that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

She thinks that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

Although U7 does not currently live here, she often considers moving back if she would be able to 'modernize' this place and make certain changes such as:

- Renewing the roof tiles,
- Changing the timber elements of the windows and doors with pvc,
- Changing the flooring to laminated flooring,
- Changing the materials of ceilings,
- Covering a part of the courtyard since the kitchen and the bathroom are located outside the main building and it becomes difficult to access these spaces in cold and rainy weather.

It is learned that they regret not making these interventions as they moved here 50 years ago. She expresses their regret by telling:

'We are aware that when we attempt something, it will be stopped. Our neighbors experienced it. We know what is going to happen to us, so we do not even try. When we moved here 50 years ago, there was a budget problem for renovations, but if my parents knew that something like this (restrictions due to conservation status) would happen, they would have gone into debt'.[10]

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[10] *'Bir şeye kalkıştığımız zaman durdurulacağını biliyoruz çünkü komşularımız yaşadı onu. Başımıza gelecekleri biliyoruz, o yüzden kalkışmıyoruz. 50 yıl önce taşındığımızda tadilat için bütçe problemi vardı ama böyle şeylerin başımıza geleceğini bilselerdi annem ve babam borca girip yaparlardı'* (translated by the author).

Case #8 - *Interview with **U8** (F, 71), homemaker born in Savran, Milas.*

Figure 55 Case #8 House - Courtyard Facade

This building was originally constructed as a residence and is still used for the same function. U8 moved to this house with her husband 68 years ago, when they got married. At that time, they were tenants, but few years later they bought the house and continued living here. The previous owner of the house was a shoemaker from Bodrum named Cemal, and this house is believed to be about 200 years old. U8 said that three families used to live here. Currently, 2 people (U8 and her husband) are living in this house.

a. Physical Features

The building is located on one side of the lot. The entrance to the house is through the courtyard. The building has a basement with a recessed entrance, which is

currently used as a cellar. The ground floor can be accessed through the stairs from the courtyard. There is an *önlük*, a kitchen and two rooms (a living room and a bedroom) on this floor. Also, there is a bathroom (installed later) at the corner of the bedroom. Although the *ocak* in the living room was covered, the *ocak* in the current kitchen was kept but it is not in use.

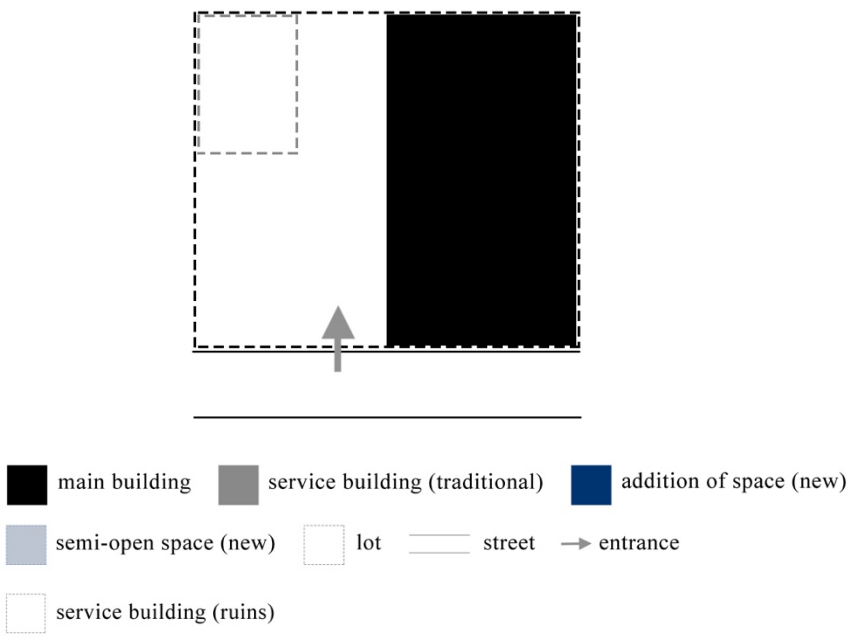

Figure 56 Case #8 House - Organization of the Buildings on the Lot

Figure 57 Case #8 House - *Önlük*

Overall, it is a single storey partially plastered and painted (white, only the courtyard façade) house with a basement. The basement has stone masonry walls, whereas the ground floor has stone masonry walls except the timber framed walls separating the kitchen from both the living room and the *önlük*.

Figure 58 Case #8 House - Rooms

b. Made Interventions

It is learned that minor repairs were done every year. However, the major changes are as follows:

- A window on the back façade was covered,
- Timber elements of windows and doors were renewed (4-5 years ago),
- Roof was retiled,
- Ceilings and floorings were renewed,
- The bathroom outside the house collapsed in the earthquake (5 years ago) and a bathroom was installed inside the house (before the registration status),
- There was a kitchen in the courtyard, where the *ocak* is currently located, but it collapsed,
- Although they were not able to relocate the sink inside the house, one of the rooms were refunctioned as kitchen,
- One of the *ocak*s (one in the living room) was covered,
- Courtyard gate was renewed.

c. Spatial and Thermal Comfort Conditions

In winter, they partially heat the house with a stove (coal). In summer, they do not use anything for cooling off. They spend most of their time at the courtyard or in the *önlük* when the weather gets warm. However, there was an air conditioner in the kitchen, which they gave to their son when he got married 2 years ago. Until then, air conditioning was used for both heating and cooling. Overall, they think that the house becomes much more comfortable in summertime, when compared to wintertime.

U8 thinks that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

She thinks that the number of rooms/spaces in their house is adequate, however she states that it would be nice to have a convenient space for the kitchen where they can place their sink (currently located in the *önlük*) as well.

d. Desired Interventions

Although U8 loves her house, the only thing she has wanted and suffered from for years is the kitchen. The kitchen in the house does not have a water installation, and it is currently used for storing the goods, cooking and dining. She has been using the sink in the *önlük* since 1968, and states that it becomes harder to carry and wash the dishes outside the house as she gets older. When she was asked about her plans and desires for the kitchen, her answer was:

'When nothing can be done, it is not possible to imagine anything. We have applied to the board (Muğla) for the kitchen 4-5 years ago, but it was rejected again'.[11]

[11] *'Valla hiçbir şey yapılamayınca, hayal mayal düşünemiyorum. 4-5 sene önce Muğla'ya mutfak için başvuru yapmıştık, yine reddedildi'* (translated by the author).

Case #9 - *Interview with **U9** (M, 76), retired businessowner born in Kalınağıl, Milas.*

Figure 59 Case #9 House - Street Facade

This building was originally constructed as a residence and is still used for the same function. U9 have been living in this house with his wife since 1969. Although they do not know the exact construction date of the building, they believe that this building is more than 100 years old. Also, they know that there was a tenant named Ahmet (dentist) living in this house before them. Currently, 2 people (U9 and his wife) live here.

a. Physical Features

The main building is located on one side of the lot. The entrance to the house is through the courtyard. In the courtyard, there are two buildings facing each other. The one on the right is the main building, and the one on the left is the service building. On the ground floor of the main building, there is one room which can be accessed directly from the courtyard.

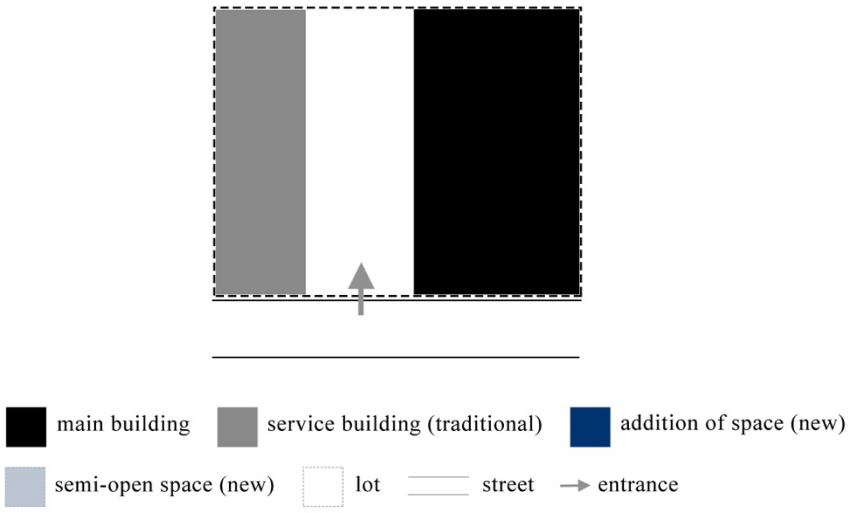

Figure 60 Case #9 House - Organization of the Buildings on the Lot

Figure 61 Case #9 House - Courtyard

The upper floor can be accessed through the stone stairs located in the courtyard. The upper floor has a narrow outer circulation space and a room that is currently used as storage. There is an *ocak* in this room.

The service building consists of a storage and a bathroom, respectively. There is a sink in front of the service building. The storage is used for keeping the kitchen appliances and foods.

Figure 62 Case #9 House - First Floor

Figure 63 Case #9 House - Service Building

Overall, the main building is a two-storey partially plastered and painted building (white, street and courtyard facades) with stone masonry ground floor, and timber framed upper floor walls. The side wall of the outer circulation space was constructed later with reinforced concrete. The service building is a plastered and painted (white) single-storey building with brick infilled timber framed walls.

b. Made Interventions

Although the access to the house was restricted, it was learned and seen that extensive interventions to the buildings were avoided by the users. As stated during

the interview, the conservation status of the house is a determining factor in their approach on this issue.

It was observed that:

- Materials of the ground floor windows were changed to pvc,
- Roof of the service building and the sink in front of it were renewed,
- Spaces in the service structure were refunctioned as kitchen and bathroom,
- Flooring of the bathroom was changed with tiles,
- Bathroom was renewed,
- Top of the courtyard was partially covered,
- Wall on the outer circulation space of the upper floor was added,
- Iron bars were installed on the ground floor windows.
- Courtyard gate was changed,

c. Spatial and Thermal Comfort Conditions

In winter, they partially heat the house with an electric heater. They believe that it is enough for two, but not enough when their grandchild comes to visit. In summer, they do not use anything for cooling off. They spend most of their time at the courtyard when the weather gets warm. Although there is an air conditioner on the ground floor of the main building, they do not use it. Previously their electricity bill was around 250 ₺, but this winter they have paid approximately 450-500 ₺. They think that this amount will reach 700-800 ₺ with the new price hikes.

Overall, they think that the rooms get enough light, the ventilation is sufficient, and the number of rooms/spaces in their house is adequate.

d. Desired Interventions

When asked about their desired changes, they stated that everything is sufficient, and they would not want anything to change.

Case #10 - *Interview with **U10** (F, 69), homemaker born in Alaçam, Milas.*

Figure 64 Case #10 House - Street Facade

This building was originally constructed as a residence and is still used for the same function. U10's husband's grandfather had built this building for his children in 1951. There are 4 flats in this building, each to be owned by his four sons. U10's husband explains the construction of this building:

'In the years when the Jewish population started to move from here, there were only two Jews left. My grandfather demolished the houses, cleaned them, and hit the ground with a pickaxe. My grandfather had four sons. He had built 4 flats in this building, one for each son. My father deeded this house to me. It was 1951 when they finished the construction. This house was built entirely by hand and human power'.[12]

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[12] *'Yahudiler buradan taşınmaya başladığı senelerde, 2 tane Yahudi kalmış. Dedem, evleri yıkmış temizlemiş, temeline vurmuş kazmayı. Dedemin dört oğlu var. Dört*

They have been living in this house with their children since 1975. However, their children left when they got married and currently, 2 people (U10 and her husband) live in this house.

a. Physical Features

The building is located on the front of the lot. There are four 4 flats in this building, 2 on each floor. U10 and her husband live in the one on the ground floor (left). There is also a basement, which is used by every flat in this building, as storage.

The entrance to the house is directly from the street, through the stairs. There is an additional space, an entranceway, which opens to the sofa. This space was added due to privacy concerns, since the people or tourists passing by tend to take photos of the house or gaze a lot. In total, there are 7 rooms: a living room, two bedrooms, three storage rooms and a kitchen. There is a terrace at the back, which can be accessed through the storage.

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oğlana bu binada iki alt iki üst 4 daire yaptırmış. Babam da bana tapu etti bu evi. Bu ev bittiğinde sene 51'miş. Tamamen el gücüyle, insan gücüyle yapılmış bu ev' (translated by the author).

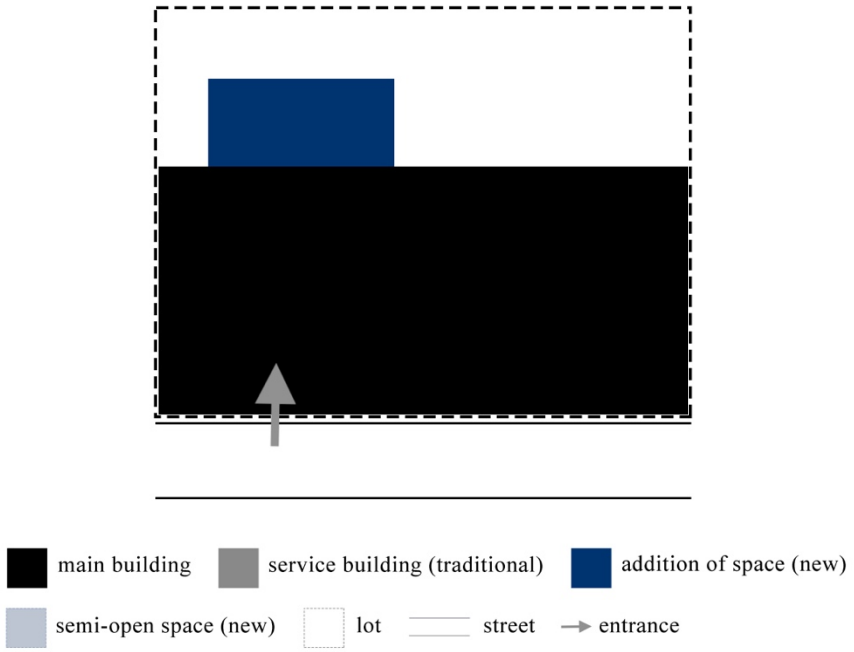

Figure 65 Case #10 House - Organization of the Buildings on the Lot

Figure 66 Case #10 House - Ground Floor - Entrance

Figure 67 Case #10 House - Ground Floor - Sofa and Rooms

Figure 68 Case #10 House - Ground Floor - Rooms and Bathroom

Figure 69 Case #10 House - Kitchen

The kitchen opens to the terrace. There are stairs on the terrace that lead you to the courtyard. The courtyard, located at the back of the building, is only accessible through the house. There is a pool in the courtyard, which is currently not in use.

Overall, it is a two-storey plastered and painted (yellow) building with stone masonry basement and clay brick walls (all floors). The terrace was constructed with reinforced concrete.

Figure 70 Case #10 House - Terrace

Figure 71 Case #10 House - Courtyard and Courtyard Facade

b. Made Interventions

It is learned that minor repairs were made every year. Also, they paint the house every 4-5 years. Other changes are as follows:

- Entranceway was added to the building due to privacy reasons and the need for a space to take off and store their shoes (30 years ago).
- They had removed the *ocak* in the living room for cleaning reasons.
- They had built the terrace.
- They had changed the flooring (except the living room).

- They had iron bars installed on some windows (except the ones on the street façade) since it became difficult to open and close the original shutters and they had experienced burglaries before.
- They removed the marble fountain in the middle of the pool since it got broken.

c. Spatial and Thermal Comfort Conditions

In winter, they use a stove (wood), electric heater, and air conditioners (one in the kitchen and one in the sofa) for heating the house. In summer, they use the air conditioners all the time (both daytime and nighttime) for two months. Overall, they believe that their house becomes less comfortable in winter since it is hard to carry wood from the storage downstairs, and they believe that the house does not get warm enough.

They think that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

They think that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

When they were asked about their desired changes, U10 and her husband stated that they love their house the way it is.

Case #11 - *Interview with **U11** (F, 58), retired insurance agent born in Milas.*

Figure 72 Case #11 House - Street Facade

This building was originally constructed as a residence and is still used for the same function. U11 was born and raised in this house, which was constructed by their grandparents. When she got older, she moved to Izmir for education and work. After her retirement, she moved back here. Although they do not know the exact construction date of this building, they believe that it is more than 100 years old. Currently, 2 people (U11 and her sister) live in this building.

a. Physical Features

The building is located on one side of the lot. The entrance to the house is directly from the street. On the ground floor, there is a sofa surrounded by a living room on the right and a kitchen on the left side.

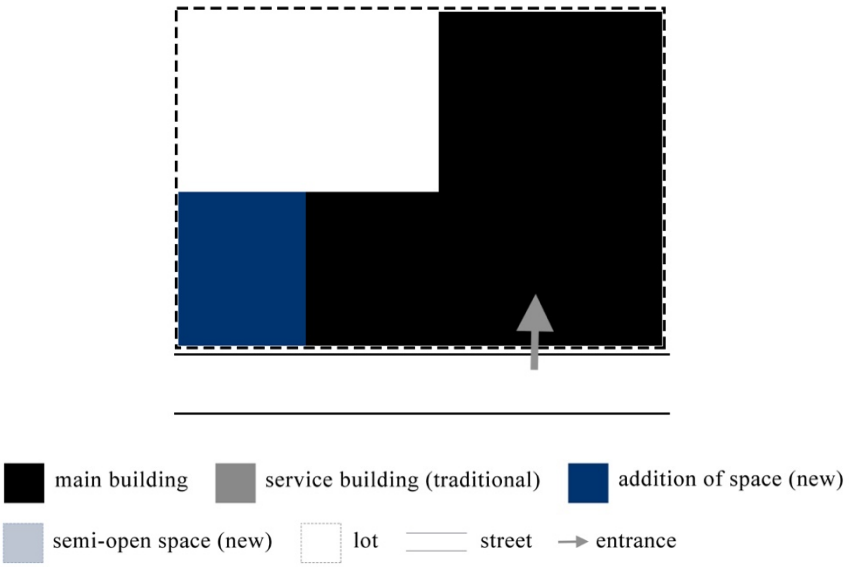

Figure 73 Case #11 House - Organization of the Buildings on the Lot

Figure 74 Case #11 House - Ground Floor - Sofa

Figure 75 Case #11 House - Staircase

Upper floor is accessed through the stairs right across the entrance door. On the upper floor, there is a sofa, 2 bedrooms, a living room, a kitchen, and a bathroom. The bedrooms are located on the left side of the sofa, while the other spaces are on the right. Although not indicated by U11, the living room on the upper floor was merged with the sofa in order to create a larger living room.

Figure 76 Case #11 House - First Floor - Sofa and Rooms

The courtyard is accessed through the sofa on the ground floor. It is partially covered with a pergola. There is a pool and an *ocak* in the courtyard.

Figure 77 Case #11 House - Courtyard

Overall, it is a plastered and painted (white) house with stone masonry ground floor and timber-framed upper floor walls. The kitchen and bathroom of the upper floor was added later with reinforced concrete. There is a projection on the street façade.

b. Made Interventions

It is learned that minor repairs were made every year. Also, they paint the house every 4-5 years. However, they have made certain changes which are as follows:

- Timber elements of the windows and doors on the upper floor were changed to pvc (34 years ago) and the ones on the ground floor were renewed,
- Materials of the flooring and ceiling of the of the living room on the ground floor were changed,
- Floorings and ceilings were renewed (10 years ago),
- Roof was retiled (2 years ago)
- One of the rooms on the ground floor was refunctioned as kitchen,
- Although the construction date is not identified, the kitchen and bathroom were added on the upper floor
- Kitchen and bathroom on the upper floor were renewed,

- Although not identified, the current living room on the upper floor is merged with the sofa in order to create larger living room,
- Iron bars were installed on the windows of the ground floor,
- Courtyard is partially covered with pergola.

c. Spatial and Thermal Comfort Conditions

In winter, they use 3 stoves (one on the ground floor, two on the upper floor) for heating. In summer, they mostly spend their time in the courtyard. However, when the weather gets too hot, they use air conditioner and ceiling fans for cooling off. This year, their electricity bill was approximately 900 ৳. Overall, she believes that their house becomes less comfortable in winter since it is difficult to heat up the house.

She thinks that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

They think that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

When she was asked about her desired changes, U11 stated that she loves this house as the way it is. However, if she were able to afford the expenses, she would change all the new elements with the original timber ones.

Case #12 - *An interview was conducted with **U12** (F, 90), homemaker born in Milas.*

Figure 78 Case #12 House - Street Facade

U12 and her husband bought this house 70 years ago. Unfortunately, when she lost her husband (21 years ago), she lived on her own for a long time. However, due to her age, she has been staying with her caregiver for the last 3 years.

This building was originally constructed as a residence and is still used for the same function Although they do not know the exact construction date of this building, they believe that it is more than 100 years old. Currently, 2 people (U12 and her caregiver) live in this building.

a. Physical Features

The building is located on the front of the lot. The entrance to the house is directly from the street. On the ground floor, there is a sofa and a living room. There is also

another room (secondary living room), which was added adjacent to and with an entrance from the main living room.

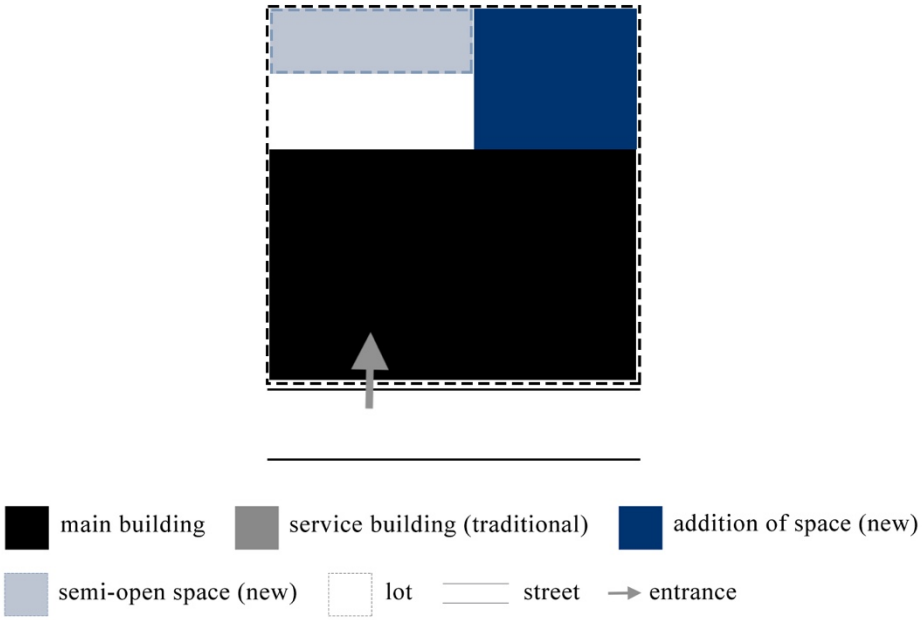

Figure 79 Case #12 House - Organization of the Buildings on the Lot

Figure 80 Case #12 House - Ground Floor - Sofa

Figure 81 Case #12 House - Ground Floor - Rooms

The upper floor is accessed through the stairs right across the entrance door. However, the upper floor is currently not in use due to inconvenience. There is a sofa, a room, and a terrace upstairs.

Figure 82 Case #12 House - Staircase

Figure 83 Case #12 House - First Floor - Terrace

The courtyard is accessed through the sofa on the ground floor. There is a kitchen (which was constructed later), a bathroom, a semi-open space with an *ocak* in the courtyard.

Overall, it is a two-storey plastered and painted (pink) house with stone masonry ground floor, and timber framed upper floor walls, except the stone masonry wall on the front façade. The additional kitchen, bathroom, semi-open space, living room and terrace was constructed later with reinforced concrete.

b. Made Interventions

It is learned that minor repairs were made every year. Also, they paint the house every 4-5 years. U12 stated that she had spent a lot of time and money for maintaining this house, but unfortunately, she was not able to carry out the

maintenance work for the past 4-5 years due to her sickness. She elaborates the changes as follows:

- The authentic timber entrance door was changed with an iron door (10 years ago),
- Timber materials of the windows on the upper floor were changed,
- Roof was retiled (9 years ago),
- Materials of the floorings on the ground floor were changed (10 years ago),
- Materials of some of the ceilings were changed, some were renewed (10 years ago),
- A sink was installed at the courtyard (10 years ago),
- A kitchen and a bathroom were added,
- A room (living room) was added (10 years ago),
- Kitchen and bathroom were renewed (10 years ago),
- Iron bars and shutters were added on the windows,
- A semi-open space was created in the courtyard with reinforced concrete.

c. Spatial and Thermal Comfort Conditions

In winter, they use stove and air conditioner for heating. In summer, U12 spends most of her time in front of her house or in the courtyard for cooling off. There is an air conditioner in the living room on the ground floor, but they rarely use it.

U12 thinks that the rooms get enough light, and the ventilation is sufficient. She does not have a problem related with the quality of the air inside the house. She thinks that the number of rooms/spaces in their house is adequate, but it would be nice to have an extra space.

d. Desired Interventions

When asked about her desired changes, U12 indicated that she would want to change the materials of windows and doors to pvc, and to expand the size of the living room by merging the 2 living rooms on the ground floor.

Case #13 - *Interview with **U13** (M, 55), general manager born in Milas.*

Figure 84 Case #13 House - Courtyard Facade

U13 and his sister were born in another traditional house in Hacı Ilyas Neighborhood, Milas, which is currently used by their aunt. Their grandfather has bought this house in 1958 and leased it out for years. Finally, they have moved to this house in 1974. U13 and his sister lived in this building until they started high school in Izmir.

This building was originally constructed as a residence and is still used for the same function. It is believed to be over 100 years old. Currently, 2 people (U13's parents) live in this building. They use this building except summertime. While they are away, U13 and his siblings visit this house once a week to ventilate and take care of the plants.

a. Physical Features

The main building is located on the back of the lot. The entrance to the house is through the courtyard. There are three buildings in the courtyard: a main building and two service buildings.

Figure 85 Case #13 House - Organization of the Buildings on the Lot

On the ground floor of the main building, there is a sofa, a kitchen (to the left), and a living room (to the right). The kitchen was expanded with an additional structure, which can be seen from the courtyard façade. The upper floor is accessed through the stairs inside the house, at the sofa. There is a door at the beginning of the staircase in order to prevent heat loss. Also, there is a space under the staircase, which was used as a storage and a cellar.

Figure 86 Case #13 House - Ground Floor - Rooms

On the upper floor, there is a sofa and there are two rooms, one on each side. Currently, U13's parents do not use the upper floor since it is difficult for them to use the stairs and there is no bathroom on the upper floor.

Figure 87 Case #13 House - Staircase

The other buildings in the courtyard, which are used as service buildings for storage purposes, are a part of a different lot. At the time, it was bought by U13's parents and all the buildings on these two lots formed a living space within a single courtyard wall. Also, there is a sink and an *ocak* in the courtyard.

Figure 88 Case #13 House - Service Buildings and Courtyard

Overall, the main building is a plastered and painted (white) two-storey house with stone masonry ground floor and timber framed upper floor walls. There is a projection on the front façade. The additional space for kitchen and bathroom was constructed with reinforced concrete.

b. Made Interventions

It is learned that minor repairs were made every year. Also, there are certain interventions made to this house, which are as follows:

- Roof was retiled,
- Timber elements of the windows and doors were renewed, and some were replaced with pvc since they were damaged and hard to clean,
- Materials of the doors on the ground floor were changed, remaining ones were renewed,
- Flooring of the living room was replaced with laminated flooring since it was deteriorated,
- Materials of the ceilings and floorings on the ground floor were changed,
- Ceilings on the upper floor were renewed,
- One of the rooms on the ground floor was refunctioned as kitchen and it was expanded with an additional structure,
- A bathroom was added,
- Window on the upper floor sofa was covered due to their neighbor's demand for privacy,
- The *ocak* on the upper floor was covered before they have moved to this house,
- A door was placed at the beginning of the staircase in order to prevent heat loss,
- Iron bars were installed on windows and doors,
- Courtyard was partially covered with pergola,
- Courtyard gate was changed.

c. Spatial and Thermal Comfort Conditions

Until 2 years ago, they used a stove for heating the house. However, it became difficult for U13's parents to use the stove, so they began to use air conditioner (in the living room) and electric heater (in the kitchen) in winter. Since they do not use upstairs, they close the door at the entrance of the staircase in order to prevent heat loss. They believe that the door has made great difference in terms of thermal comfort.

In summer, they move to their summerhouse (near Milas).

They think that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

They think that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

Although U13 and his sister would like to live in this house in the future, they believe that certain changes should be made in advance:

- They want to renew the buildings on this lot as separate housing units for each of the three siblings so that they can have their own houses,
- They want to keep the façades of the buildings as they are, but 'modernize' the interiors by changing the materials of windows, doors, floorings, ceilings,
- They want to add a building which has a connection with the street/has a street façade,
- They want bigger kitchens,
- They want bathroom on the upper floors as well.

Case #14 - *Interview with **U14** (F, 54), retired employee born in Milas.*

Figure 89 Case #14 House - Street Facade

U14's mother (80) and father bought this house in 1966 and U14 was born and raised in this house. She moved out when she got married but have been visiting her mother almost every day. Unfortunately, 4 years ago, her father, who once had organized this house as two separate flats for the use of their daughters, passed away.

This building was originally constructed as a residence and is still used for the same function. It is believed to be around 150-200 years old. Currently, 5 people live in

this building. U14's son lives in the flat on the ground floor with his wife and two children, and her mother lives upstairs.

a. Physical Features

The main building is located on the front of the lot, partially. Originally, the entrance to the house was directly from the street, but it was changed since it was reorganized as two separate flats. The entrance of the flat on the ground floor is directly from the street, whereas the entrance of the flat on the upper floor is through the stairs located at the courtyard entrance. There are two buildings in the courtyard. The main building is located at the left side and the service building is across the courtyard entrance. These two buildings are connected to each other with a terrace on the upper floor and a semi-open space on the ground floor.

The flat on the ground floor could not be accessed.

The stairs leading to the flat on the upper floor reaches the terrace. This flat consists of a sofa, a bedroom, a kitchen and a bathroom. It was indicated that the sofa on the upper floor used to be open. The *önlük* was closed later, with the reorganizations for creating two separate flats.

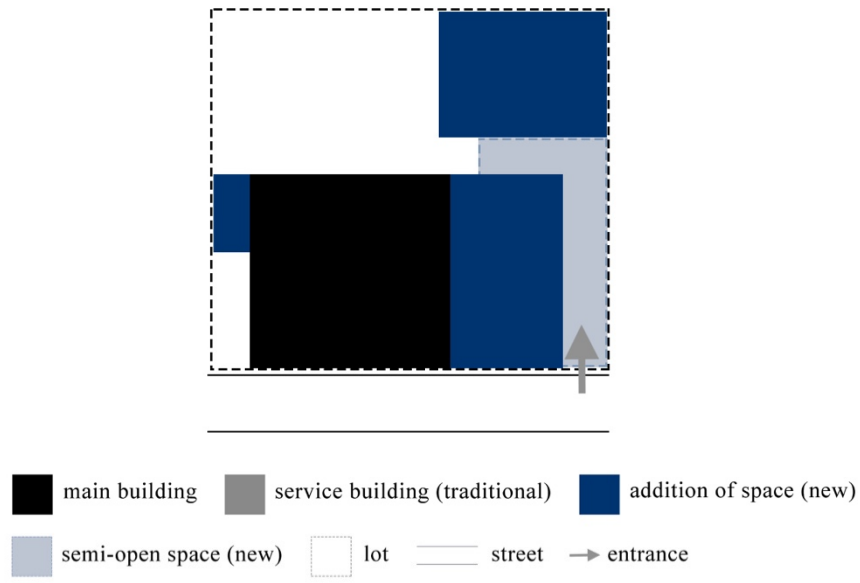

Figure 90 Case #14 House - Organization of the Buildings on the Lot

Figure 91 Case #14 House - Courtyard Facade

Figure 92 Case #14 House - First Floor

The service building connected to the main building is used as storage. There is also a structure adjacent to the main building, which used to be the toilet of this house. Currently, it is not in use.

Overall, the main building is a partially plastered and painted (white) two-storey house with stone masonry ground floor walls. There are large marble blocks with inscriptions on side façade of the ground floor, which can be seen from the street. The upper floor has timber framed walls with brick infill. At the time, the sofa on the upper floor has been expanded and the kitchen and bathroom were added later with reinforced concrete. The service building connected to the main building was constructed later with reinforced concrete as well. The original bathroom located in the courtyard is a single storey stone masonry structure.

b. Made Interventions

At the time U14's father was alive; he reorganized this building so it can be used as two separate flats. It is learned that there used to be a marble staircase in the courtyard, and there was an *önlük* and two rooms on the upper floor. However, the *önlük* was closed and the marble staircase was changed. Also, there used to be an opening on the courtyard wall, through which you could access the neighboring lot. Although this opening was covered, it is possible to see its traces on the wall.

Overall, there are other interventions made to this house, which are as follows:

- Kitchen and bathroom on the upper floor were added with reinforced concrete,
- The ceiling of the upper floor sofa
- The ceiling of the ground floor and the flooring of the upper floor was originally timber, but they have changed it with reinforced concrete since it was damaged,
- Posts were added in order to strengthen the building
- The *ocak* and the niches on the upper floor were covered since they were not used

c. Spatial and Thermal Comfort Conditions

In winter, the house is heated with a stove. In summer, nothing is used for cooling off, they spend most of their time in front of the courtyard entrance or on the terrace.

They think that the rooms get enough light, and the ventilation is sufficient. However, they experience dampness problems due to the damaged roof and walls.

They think that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

When U14 was asked about their desired changes, she indicated that the roof and ceilings should be renewed urgently since it has holes on it. Her mother tries to live here by using basins and membranes until they have the permission to renew the roof. U14 explains herself as:

'The local people of Milas are generally well-off and educated people. Do not look at the fact that we live in such houses. We are forced to live under these circumstances. These are our own properties. They are very run down, but we are making repairs as much as we can. Look at my mother's way of life, it hurts. Authorities should at least allow these houses to be restored'.[13]

When U14 was asked about whether she would want to live in this house after her mother, she responded that she would definitely move here if she would be able to 'modernize' it by changing the materials of windows, doors, floorings, ceilings.

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[13] *'Milas'ın yerlileri genelde okumuş insanlardır. Bakma bu evlerde yaşadığımıza. Mecburen. Kendi mülklerimiz. Çok köhne evet ama elimizden geldiğince tadilatlar yapıyoruz. Ama nenenin yaşam şeklini gör, acırsın. En azından restore edilsin, izin versinler'* (translated by the author).

Case #15 - *Interview with **U15** (F, 83), homemaker born in Milas.*

Figure 93 Case #15 House - Street Facade

U15 came to this house as a bride when she was 17-18 years old. At that time, she began to live with her husband's family. When her parents-in-law passed away and her sisters-in-law got married and left the house, U15 started to live here with her husband and children until they got married and left the house as well. As U15 lost her husband and began to need help due to her age, her son started to live with her.

This building was originally constructed as a residence and is still used for the same function. It is believed to be over 150 years old. Currently, 2 people (U15 and her son) lives in this building.

a. Physical Features

The main building is located on one side of the lot. The house is accessed through the courtyard. When entered the courtyard, the main building is located on the left, and there are two service buildings facing each other on the right.

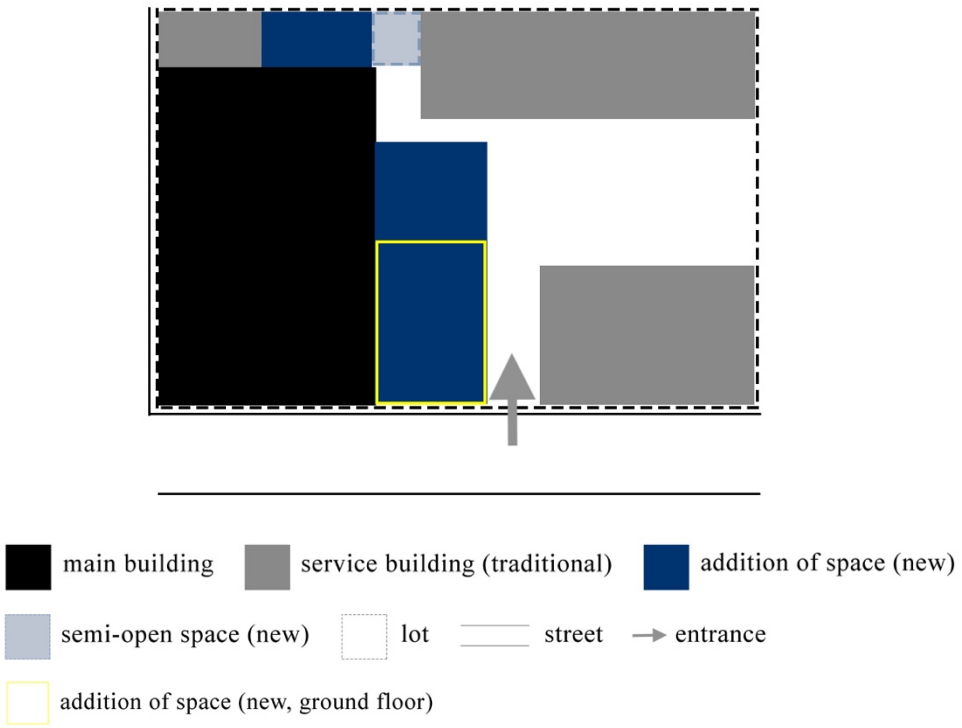


Figure 94 Case #15 House - Organization of the Buildings on the Lot

There is a platform-like space in front of the entrance of the house that is organized as an outdoor sitting area. To the left, there is an additional space, which is used as the kitchen and entered from outside. When you enter the house, you enter the sofa. There are two rooms on this floor, one on each side of the sofa. The one on the left

is used as the living room and the bedroom, whereas the one on the right is organized as a living room but used as storage. There is an *ocak* in this room, which is currently not in use. From the other side of this room, across the entrance, you can access the bathroom. This bathroom is in its original place; however, it was expanded (to install handles and change the original marble toilet with a European-style one) and provided with an entrance from inside the house as due to U15's special needs. The original entrance to the bathroom was directly from the platform-like space, which still exists but is not in use.

Figure 95 Case #15 House - Space Addition (Kitchen)

Figure 96 Case #15 House - Ground Floor - Sofa and Rooms

Figure 97 Case #15 House - Staircase

The upper floor can be accessed through the staircase located in the sofa, which has a cellar underneath. On the upper floor, there is a sofa surrounded by three rooms. The room across the stairs has access to a terrace, which was added later with the construction of the kitchen on the ground floor. The room on the left has an authentic cupboard with a *gusülhane* on one side and an *ocak* on the other. Currently, this room is used as storage. The other room on the right side of the stairs is a bedroom. It is learned that when U15 got married and moved to this house, her parents-in-law, sisters-in law, and she and her husband each had their own rooms. Currently, this floor is not frequently used, they use it as storage and a space to hang and dry clothes in winter.

Figure 98 Case #15 House - First Floor - Sofa

Figure 99 Case #15 House - First Floor Rooms

There are two service buildings in the courtyard, facing each other. One of them is located to the right of the courtyard entrance. This building was constructed later, and it is currently used as storage and a shelter for their dog. The other service building is connected to the main building with a roof, but it does not have an entrance from inside the house. This building has two rooms with separate entrances from the courtyard. The room that is closer to the main building used to be the kitchen with an *ocak* and the other was the laundry room where they used to set up a boiler stove and wash their clothes. Currently, these two rooms are used as storage.

Figure 100 Case #15 House - Service Buildings

Overall, the main building is a plastered and painted two-storey building with stone masonry ground floor and timber framed upper floor walls. The third room across the staircase on the upper floor sofa and the kitchen on the ground floor was added later with reinforced concrete. The additional room creates a projection on the courtyard façade. The service buildings are single storey plastered and painted (white) structures with timber framed (clay brick infill) walls.

b. Made Interventions

It is learned that minor repairs were made every year. About 15 days before the interview, they painted the house because of the smudge caused by the stove. In

general, they paint their house every 2-3 years. Apart from this, although the dates are unknown, they have made certain changes as such:

- Roof was retiled,
- Third room on the upper floor was added,
- Kitchen and terrace were added,
- Bathroom was renewed and changed according to U15's needs,
- Iron bars were installed on one of the ground floor windows,
- Courtyard gate was changed.

They indicated that they have been very cautious about the interventions and acted according to the rules and regulations. To elaborate, their roof leaked for a long time, during which they had to use basins inside the house in rainy weathers. However, U15's son worked very hard to get the permission to renew the roof.

c. Spatial and Thermal Comfort Conditions

In winter, a stove (wood) and an electric heater is used in the living room. Also, they use a boiler stove in the bathroom to provide hot water. In summer, nothing is used for cooling off, they spend most of their time in the courtyard. Overall, U15 thinks that the house is very cool in summer and not very cold in winter. They indicate that it is due to the gap of 1-1.5 meters from the foundation to the ground.

They think that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house. They think that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

When asked about her desired changes, U15 indicated that she would want nothing to change.

Case #16 - *Interview with **U16** (F, 49), businessowner born in Milas.*

Figure 101 Case #16 House - Street Facade

U16 and her family moved to this house in 1999. Although they do not know the exact construction date of this building, they believe that it is more than 100 years old. Currently, 3 people (U16, her husband and their daughter) live in this house.

This building was originally constructed as a residence and is still used for the same function. However, U16 has converted a part of the courtyard into a shop to run her business.

a. Physical Features

The building is located on the front of the lot, partially. The entrance to the house is through the shop (which was originally a part of the courtyard).

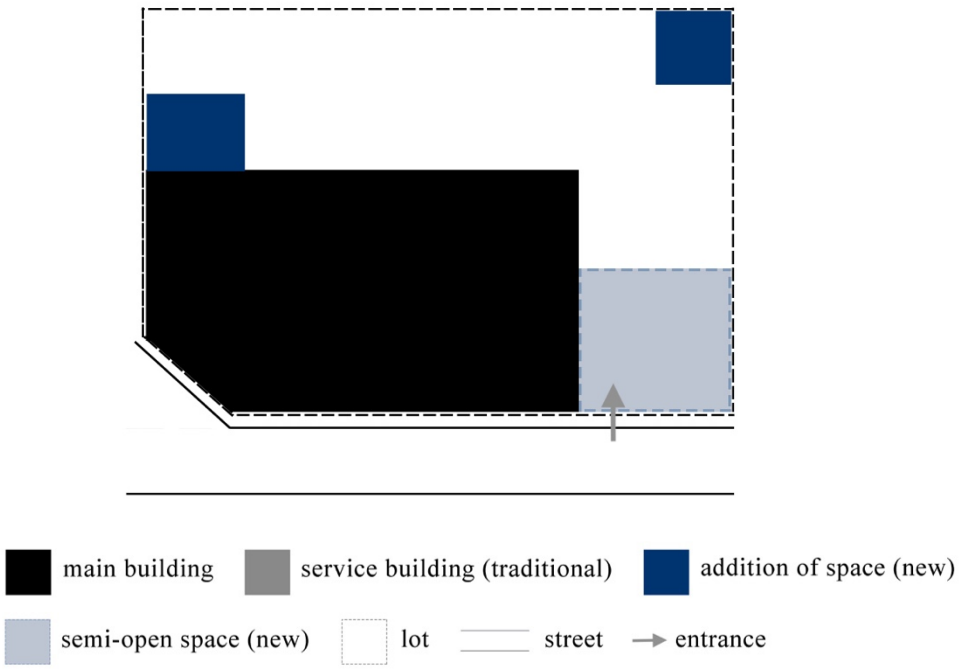


Figure 102 Case #16 House - Organization of the Buildings on the Lot

Although the house was not accessible at the time this interview was conducted, U16 explained the spatial configuration of the house. It is learned that there is a living room and an open kitchen on the ground floor, and there are three rooms (2 bedrooms and one storage) on the upper floor. The upper floor can be accessed through the stairs located inside, at the entrance of the building.

There is a service building at the corner of the courtyard, which is used as a storage.

Figure 103 Case #16 House - Semi-open Space Addition

Figure 104 Case #16 House - Courtyard Facade

Figure 105 Case #16 House - Courtyard

Overall, it is a two-storey plastered and painted (yellow) building with stone masonry ground floor and timber framed upper floor with reinforced concrete interventions. Also, there is a triangular projection on the street façade, in order to use right angles on the upper floor. The service building is a single storey plastered and painted structure with brick walls.

b. Made Interventions

It is learned that minor repairs were made every year. Also, they paint the house every 5 years. 10 years ago, they have made extensive changes in the house. Although the house could not be accessed, made changes were listed according to U16's statements and observations made from the exterior. Overall, the interventions are as follows:

- Sizes of the windows and doors were changed (10 years ago),
- Materials of some of the windows and doors were changed to pvc, some were renewed (10 years ago),
- Roof was renewed due to thermal insulation and cleaning reasons (10 years ago),
- One of the spaces on the ground floor was refunctioned as kitchen and it was remodeled as an open kitchen. As a result, kitchen and living room sizes were changed (10 years ago),
- Bathroom was added,
- A semi-open space (reinforced concrete) was added, which is currently functioned as a shop where U16 can work,
- Storage (in the courtyard) was added,
- Bathroom and kitchen were renewed,
- Iron bars were installed on the ground floor windows,
- Courtyard gate was changed.

c. Spatial and Thermal Comfort Conditions

In winter, they use air conditioner and electric heater for heating. They are waiting for the natural gas infrastructure to be established so that they can start using it for heating. In summer, they use the air conditioner while using the upper floor, but they do not use anything on the ground floor since the stone masonry walls keep the building cool enough. Overall, U16 believes that their house becomes less comfortable in summertime.

She thinks that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

She thinks that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

When asked about her desired changes, U16 indicated that she would want nothing to change.

Case #17 - *Interview with **U17** (F, 72), homemaker born in Ören, Milas.*

Figure 106 Case #17 House - Courtyard Facade

U17 and her husband have been living in this building since 1971. Although they do not know the exact construction date of this building, they believe that it is more than 100 years old. It was originally constructed as a residence and is still used for the same function. Currently, 2 people (U17 and her husband) live in this building.

a. Physical Features

The main building is located on the back of the lot. The entrance to the house is through the courtyard. There is the main building facing the entrance door and there are two service buildings to the right. The service buildings are used as storage.

There is a bedroom, a living room, a guest room, a kitchen on the ground floor of the main building. All the rooms can be accessed from the courtyard with separate doors. The upper floor is used as a terrace.

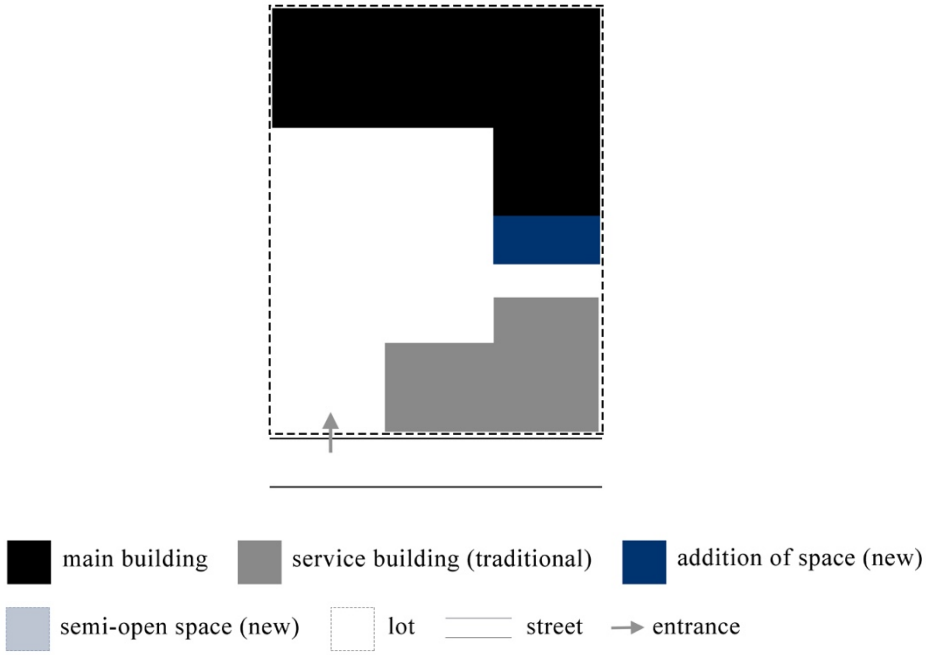


Figure 107 Case #17 House - Organization of the Buildings on the Lot


Figure 108 Case #17 House - Courtyard

Figure 109 Case #17 House - Service Buildings

Overall, it is a two-storey plastered and painted (red) house with stone masonry sub-basement and reinforced concrete upper floors. The service buildings on the courtyard have stone masonry walls.

b. Made Interventions

This house was demolished (reason unknown). The sub-basement of the previous structure was kept, and a new structure was built on the ruins with reinforced concrete. As a result, it is possible to say that the sizes and materials of the windows and doors were changed, materials of surface coverings (ceiling, flooring and roofing) were changed, one of the spaces on the ground floor was refunctioned as kitchen, living room was expanded, upper floor was converted into a terrace, bathroom was added in the main building, iron bars were installed on the windows of service buildings and the courtyard gate, and the courtyard gate was changed.

It is learned that minor repairs were made every year. Also, they paint the house every 4-5 years. They have renewed the bathroom (this year) and closed the well in the courtyard (16 years ago).

c. Spatial and Thermal Comfort Conditions

In winter, they use a stove in the living room for heating. In summer, they mostly spend their time in the courtyard. However, when the weather gets too hot, they use 2 air conditioners for cooling off. Overall, they believe that their house becomes less

comfortable in summertime since the weather in Milas is very hot in summer and the heat bothers them.

She thinks that the rooms get enough light, and the ventilation is sufficient. They do not have a problem related with the quality of the air inside the house.

She thinks that the number of rooms/spaces in their house is adequate.

d. Desired Interventions

When asked about her desired changes, U17 indicated that she would want nothing to change.

3.4 Analyzing Today's Traditional Residential Fabric and Traditional Dwellings in Milas and Their Users

A total of 17 traditional dwellings were studied within the determined study area in the traditional residential urban fabric of Milas. The interiors of Case#16 and Case#17 Houses could not be accessed due to unavailability of the users, however some information about the interior organization could be gathered during the interviews. Case#16 House has recently undergone extensive intervention; therefore, the original façade and interior spatial organizations cannot be identified. On the other hand, it is learned a new reinforced concrete structure was constructed on the ruins of the Case#17 House by keeping only the stone masonry plinth wall. For this reason, the original façade and interior spatial organizations of this structure cannot be identified as well.

Moreover, among the studied traditional dwellings, the latest period examples are the houses 5 and 10. In fact, these two dwellings are the first apartment-like structures in the region. One of these two-storey buildings consists of two flats and the other consists of four. It should be mentioned that flats in each structure are used by the siblings of the same family.

All in all, analyzes were made based on the results from physical and social research. Regarding physical research, location of the building on the lot, number of floors, façade organization, construction material and technique, building function and plan type were examined. In other respects, in accordance with the social research, demographic data (sex, age, occupation, hometown), building use and ownership (building age, ownership status, duration of inhabitance, frequency of use, number of users), spatial and thermal comfort conditions in building scale (heating method, cooling method, less comfortable season, ventilation, lighting, number of rooms/spaces, problems related with interior air quality, made interventions, desired interventions, most valuable feature, most problematic feature), spatial comfort conditions in neighborhood scale (security, neighborly relations, public services and social reinforcements, maintenance, tourism, most valuable feature, most

problematic feature), and sense of belonging and willingness to conserve (sense of belonging, contentedness with living here, opinion on the value of the house, opinion on conservation, responsibility for conservation, willingness to participate, willingness to pay) were addressed. Moreover, within the scope of social research, opinions of younger generation users were analyzed in terms of their willingness to move back and restrictions affecting their decisions on the matter.

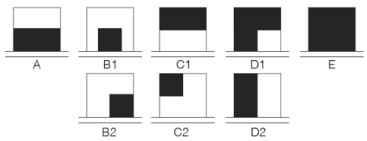
a. Physical Research - *Buildings*

Physical features of the buildings were examined under 5 categories: location on the lot, number of floors, façade, construction material and technique, building function, and plan type.

Location on the Lot

The main buildings are grouped regarding their location on the lot. Accordingly, the buildings are located either on the front of the lot (A), partially on the front of the lot (B), on the back of the lot (C), on one side of the lot (D), or on the whole of the lot (E). These main types are also divided into subcategories according to their specific locations or sizes such as B Type as B1 and B2; C Type as C1 and C2; and D Type as D1 and D2.

Table 6 Location on the Lot - Typology

Location on the Lot	A – on the front B – on the front, partially C – on the back D – on one side E – on the whole	

As a result, it is seen that 2 of the houses are located on the front of the lot (A), 4 of the houses are located partially on the front of the lot (B), 3 of the houses are located on the back of the lot (C), and 8 of the houses are located on one side of the lot (D).

Table 7 Location on the Lot - Studied Houses

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A											•		•					
B	B1																	
	B2	•	•												•		•	
C	C1													•				•
	C2							•										
D	D1																	
	D2			•	•	•	•		•	•		•				•		
E																		

When examined regarding the places and sizes of the buildings, the order according to their frequency is as follows: 8 of the houses have D2, 4 of the houses have B2, 2 of the houses have A, 2 of the houses C1, and 1 of the houses has C2 type of location on the lot. Although, identified as one of the location types for this region, there were no examples for B1, D1 or E types. Overall, most of the studied houses are located on one side of the lot (D), and every of them has courtyards.

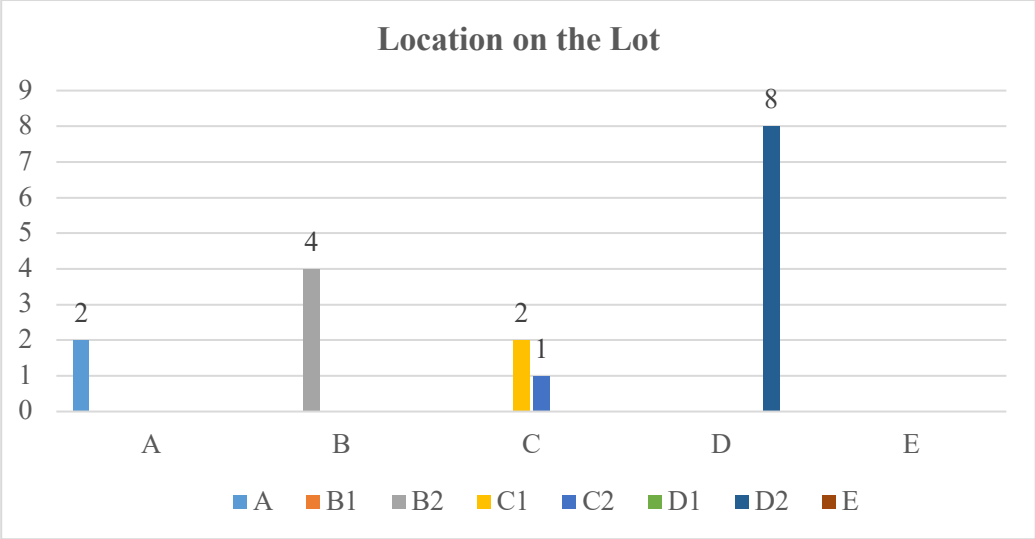


Figure 110 Location on the Lot - Distribution

Number of Floors

The main buildings are grouped regarding their number of floors. Accordingly, they are either single or two storey structures. As a result, it is seen that 16 out of 17 houses are two storey, and 1 out of 17 houses is single storey structures, in other words the studied houses mostly have two floors.

Table 8 Number of Floors - Studied Houses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
single								•									
two	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•

Façade

The main buildings were grouped regarding the organization of their main entrance facades. Accordingly, there are examples of street façade with main entrance (A) and courtyard façade with main entrance (B). Organizations of these facades were examined through existence and type of projections, and existence of chimneys.

Additionally, number of floors and the location of the entrances on the facades were identified. Each of these data are given codes in order to specify the façade types of the studied buildings.

Table 9 Facade - Typology

		Main Entrance Façade									
		Street Façade with Main Entrance (A)					Courtyard Façade with Main Entrance (B)				
		With Projection (1)			Without Projection (2)		With Projection (1)			Without Projection (2)	
		Total Projection (tp)	Middle Projection (mp)	Side Projection (sp)	With chimney (c)	Without chminey (nc)	Total Projection (tp)	Middle Projection (mp)	Side Projection (sp)	With chimney (c)	Without chminey (nc)
Single Storey (1)	Entrance on the side of the central axis (')	A1tp1'	A1mp1'	A1sp1'	A2c1'	A2nc1'	B1tp1'	B1mp1'	B1sp1'	B2c1'	B2nc1'
	Entrance in the middle ('')	A1tp1''	A1mp1''	A1sp1''	A2c1''	A2nc1''	B1tp1''	B1mp1''	B1sp1''	B2c1''	B2nc1''
	Separate entrances for each room (*)	A1tp1*	A1mp1*	A1sp1*	A2c1*	A2nc1*	B1tp1*	B1mp1*	B1sp1*	B2c1*	B2nc1*
Two Storey (2)	Entrance on the side of the central axis (')	A1tp2'	A1mp2'	A1sp2'	A2c2'	A2nc2'	B1tp2'	B1mp2'	B1sp2'	B2c2'	B2nc2'
	Entrance in the middle ('')	A1tp2''	A1mp2''	A1sp2''	A2c2''	A2nc2''	B1tp2''	B1mp2''	B1sp2''	B2c2''	B2nc2''
	Separate entrances for each room (*)	A1tp2*	A1mp2*	A1sp2*	A2c2*	A2nc2*	B1tp2*	B1mp2*	B1sp2*	B2c2*	B2nc2*

It should be noted that 5 of the 17 houses are not included in this evaluation since their original façade organizations could not be determined due to changes or additions. In that sense, façade organizations of 12 houses are taken into account. As a result, it is identified that 7 houses have street façade with main entrance (A), and 5 houses have courtyard façade with main entrance (B). All the ones that have street façade with main entrance have two floors. 5 of these 7 houses have projections (A1), and 2 of them do not have any projections (A2). Among the 5 houses that have projections, 2 of them have their entrance on the side of the central axis (') and 3 of

them have their entrance in the middle (’’). Although the location of their main entrances varies, all the houses that belong to A1 type have middle projections (mp). In other respects, the 2 houses which do not have any projections (A2), do not have any chimneys as well. One of these houses have its entrance on the side of the central axis (’) whereas the other has its entrance in the middle (’’).

When the buildings that have courtyard façade with main entrance are examined, it is possible to see that 1 of the houses has single floor, while the remaining 4 houses have two floors. The only house with single floor does not have a projection (B2), yet it has a chimney (c). Also, it has separate entrances for each room (*).

All the 4 houses that have courtyard façade with main entrance have projections (B1). Among these 4 houses that have projections, 1 of them has its entrance in the middle (’’) and 3 of them have separate entrances for each room (*). Only the house that has its main entrance in the middle has a middle projection (mp). One of the houses that have separate entrances for each room has total projection (tp) due to existence of an *önlük*, and the remaining 2 houses with separate entrances for each room have side projections (sp) due to having an outer circulation space (instead of a sofa) on their first floors.

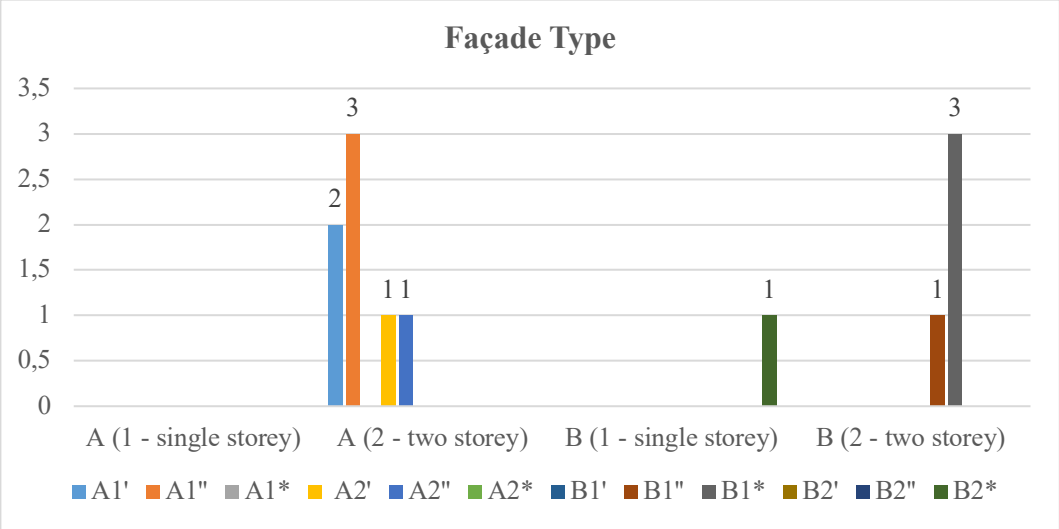


Figure 111 Facade Type - Distribution

Table 10 Facade - Studied Houses

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Façade with main entrance	Street (A)	•	•	•		•					•	•	•					
	Courtyard (B)				•			•	•	•				•				
Projection	Total (tp)							•										
With projection (1)	Middle (mp)	•	•			•					•	•		•				
	Side (sp)				•					•								
Without projection (2)	With chimney (c)								•									
	Without chimney (nc)			•									•					
Number of floors	Single (1)								•									
	Two (2)	•	•	•	•	•		•		•	•	•	•	•				
Location of the entrance	On the side of the central axis (‘)		•								•		•					
	In the middle (‘’)	•		•		•						•		•				
	Separate entrances for each room (*)				•			•	•	•								
Façade Type		**A1mp2’’**	**A1mp2’**	**A2nc2’’**	**B1sp2***	**A1mp2’’**		**B1tp2***	**B2c1***	**B1sp2***	**A1mp2’**	**A1mp2’’**	**A2nc2’**	**B1mp2’’**				

Construction Material and Technique

The main buildings are grouped regarding their construction materials and techniques. Since the choice of materials or techniques can vary between floors, ground floors and first floors are examined separately. Accordingly, there are 3 types: masonry on all floors, masonry ground floor with timber framed upper floor, and masonry ground floor with reinforced concrete upper floor.

Table 11 Construction Material and Technique - Typology

Construction Material and Technique	**ground floor**		**first floor**
	stone masonry	+	stone masonry
	stone masonry	+	timber frame
	stone masonry	+	reinforced concrete

As a result, 14 of the houses have stone masonry ground floor and timber frame upper floor walls, and 3 of the houses have stone masonry ground floor and reinforced concrete upper floor walls. While stone masonry on all floors was a type for this region, there were no examples among the studied houses.

Table 12 Construction Material and Technique - Studied Houses

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
stone masonry + stone masonry																	
stone masonry + timber frame	•	•	•	•		•	•	•	•		•	•	•	•	•	•	
stone masonry + reinforced concrete					•					•							•

Building Function

The main buildings were grouped regarding their original and current functions. Since this study is concerned with houses which are currently used as residences, the functions different than residential were indicated as 'other'. Accordingly, there are examples of buildings which are originally residential and currently residential as well, originally residential but currently other than residential, and originally other than residential but currently residential.

Table 13 Building Function - Typology

	original function → current function
Building Function	residential → residential
	residential → other
	other → residential

In result, 16 out of 17 buildings are both originally and currently used for residential purposes. The remaining 1 out of 17 houses, which is indicated as originally other than residential but currently used for residential purposes, used to be a barn. It was learned that this building was being used as a residence for at least 100 years.

Table 14 Building Function - Studied Houses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
residential - residential	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•
residential - other																	
other - residential						•											

Plan Scheme

The main buildings were grouped regarding their plan types. These types were determined by examining the first floors, which have a decisive role in the plan scheme. Formation of these types is mainly based on the locations and features of the sofas and rooms. Accordingly, there are 4 main categories:

- **Type A:** Plan type with an outer sofa, room(s) on one side of the sofa
- **Type B:** Plan type with a corner sofa, room(s) on both sides of the sofa
- **Type C:** plan type with an inner sofa, room(s) on both sides of the sofa
- **Type D:** plan type with no sofa, but with an outer circulation space that can be accessed through the staircase located on the courtyard, and room(s) on one side.

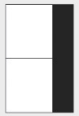
These plan types have subcategories regarding the distribution of rooms. These categories can be listed as: A1, A2; B1, B2; C1, C2, C3, C4, C5, C6; D1, D2. Additionally, sizes, shapes and types of sofas or circulation spaces are examined and identified as narrow (a) or wide (b), and open (*) or closed. Projections (p) and balconies (b) are reflected in the detailed plan types as well.

2 of the houses are not involved in this evaluation since they could not be accessed, and they have gone through major changes where original plan types could not be identified. Overall, plan types of 15 houses were categorized. As a result, it is determined that most of the houses have C type plans. To elaborate, 3 out of 15 houses have type A, 1 out of 15 houses has type B, 9 out of 15 houses have type C, and 2 out of 15 houses have type D plans.

When examined according to the distribution of rooms, the order regarding their frequency is as follows: 4 of the houses have C1, 3 of the houses have A1, 1 of the houses has B1, 1 of the houses has C2, 1 of the houses has C3, 1 of the houses has C4, 1 of the houses has C5, 1 of the houses has C6, 1 of the houses has D1, and 1 of the houses has D2 plan.

Table 15 Plan Type - Typology

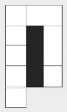
Outer Sofa (A)

Distribution of rooms		Narrow (Aa)		Wide (Ab)	
		Open (*)	Closed	Open (*)	Closed
A1		Aa1*	Aa1	Ab1*	Ab1
A2		Aa2*	Aa2	Ab2*	Ab2

Corner Sofa (B)

Distribution of rooms		Narrow (Ba)		Wide (Bb)	
		Open (*)	Closed	Open (*)	Closed
B1		Ba1*	Ba1	Bb1*	Bb1
B2		Ba2*	Ba2	Bb2*	Bb2

Inner Sofa (C)

Distribution of rooms		Narrow (Ca)		Wide (Cb)	
		Open (*)	Closed	Open (*)	Closed
C1		Ca1*	Ca1	Cb1*	Cb1
C2		Ca2*	Ca2	Cb2*	Cb2
C3		Ca3*	Ca3	Cb3*	Cb3
C4		Ca4*	Ca4	Cb4*	Cb4
C5		Ca5*	Ca5	Cb5*	Cb5
C6		Ca6*	Ca6	Cb6*	Cb6

Outer Circulation Space (D)

Distribution of rooms		Narrow (Da)		Wide (Db)	
		Open (*)	Closed	Open (*)	Closed
D1		Da1*	Da1	Db1*	Db1
D2		Da2*	Da2	Db2*	Db2

Table 16 Plan Type - Studied Houses

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Location of the Sofa or Circulation Space	Outer Sofa (A)	A1							•					•		•			
		A2																	
	Corner Sofa (B)	B1																	
		B2						•											
	Inner Sofa (C)	C1		•	•										•		•		
		C2					•												
		C3											•						
		C4	•																
		C5								•									
		C6										•							
	Outer Circulation Space (D)	D1									•								
		D2				•													
Size and Shape of the Sofa or Circulation Space		Narrow (a)		•	•	•					•	•		•	•				
		Wide (b)	•				•	•	•	•			•			•	•		
Type of Sofa or Circulation Space		Open (*)				•			•	•	•								
		Closed	•	•	•		•	•				•	•	•	•	•	•		
Projections or Balconies	1 projection (p)		•			•			•		•	•	•		•				
	2 projections (p')			•															
	1 balcony (b)						•												
Plan Type			**Cb4p**	**Ca1p'**	**Ca1**	**Da2*p**	**Cb2b**	**Bb2**	**Ab1*p**	**Cb5***	**Da1*p**	**Ca6p**	**Cb3p**	**Aa1**	**Ca1p**	**Ab1**	**Cb1**		

b. Social Research - *Users*

Social features of the users were examined under 4 categories: demographic data, building ownership and usage, spatial and thermal comfort conditions (building scale), spatial comfort conditions (neighborhood scale), and sense of belonging and willingness to conserve.

Demographic Data

17 interviews were conducted with the users of traditional houses within the study area.

To elaborate the demographic structure of the 17 interviewees:

- **Sex:** 14 were female and 3 were male,

- **Age:** 4 were between the ages 49-59, 10 were between the ages 60-74 and 3 were between the ages 75-89. It should be noted that only the ages of the interviewed users are included in the data presented on the age. During the interviews, the ages of other household members were also learned. Among the 35 users residing in the studied buildings, only 4 people (a 29-year-old, a 15-year-old, and 2 children under the age of 5) are under 30 years old.

- **Occupation:** 9 were homemakers, 5 were retired, 1 was a business owner, 1 was a general manager and 1 was a musician,

- **Hometown:** 16 were from Milas (11 from the central district and 5 from the other districts of Milas) and 1 was from Bodrum. Majority of the users are from Milas, only 1 user is from Bodrum. However, this user has been living in Milas for 27 years and accepts herself as a local. Most of the users whose birthplace is Milas were born in the central district and continue to live here. On the other hand, those born in the surrounding districts of Milas, settled in the central district due to marriage during their youth.

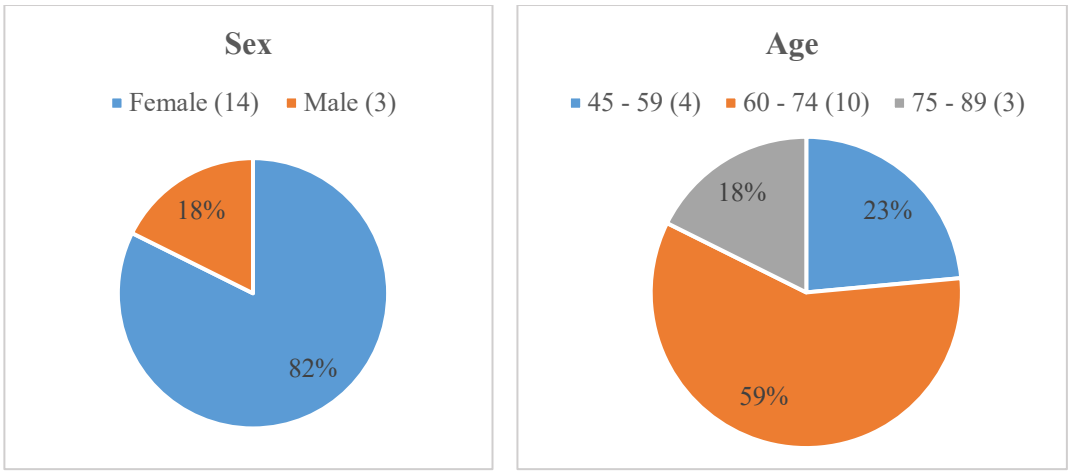


Figure 112 Demographic Data - Sex and Age

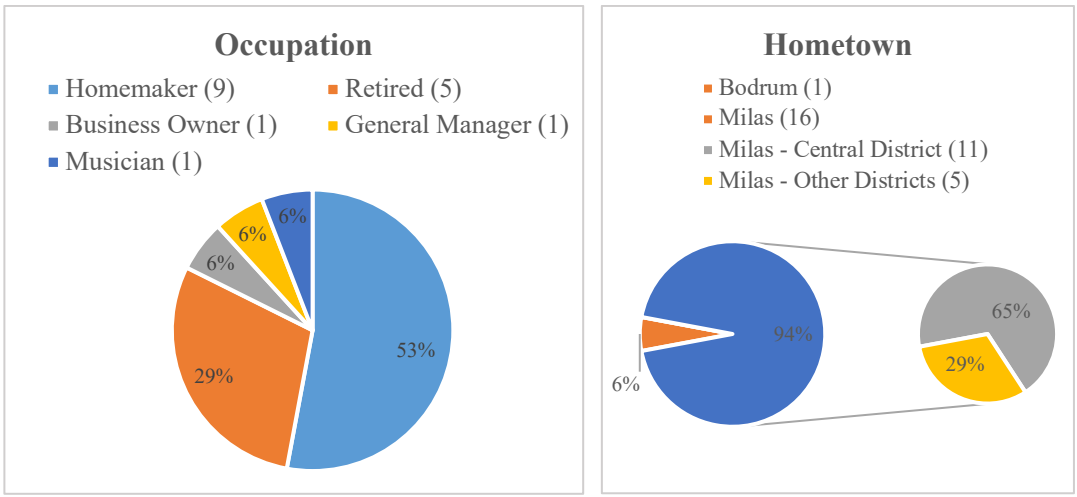


Figure 113 Demographic Data - Occupation and Hometown

Overall, majority of the interviewed users are women, 60 years of age and older, homemakers or retired. There are hardly any young people among the users. It is learned that the users spend most of their time in their houses. Additionally, almost all of them (except one) were born in Milas, yet they all consider themselves as locals.

Table 17 Demographic Data - Studied Houses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Sex	F	F	F	F	F	M	F	F	M	F	F	F	M	F	F	F	F
Age	68	60	72	70	69	70	60	71	76	69	58	90	55	54	83	49	72
Occupation	Homemaker	Homemaker	Homemaker	Retired (teacher)	Retired (pharmacist)	Musician	Homemaker	Homemaker	Retired (business owner)	Homemaker	Retired (insurance agent)	Homemaker	General Manager	Retired	Homemaker	Business owner	Homemaker
Hometown	Pınarcık, Milas	Milas	Mumcular, Bodrum	Milas	Milas	Milas	Milas	Savran, Milas	Kalınağıl, Milas	Alaçam, Milas	Milas	Milas	Milas	Milas	Milas	Milas	Ören, Milas

Building Ownership and Use

Building ownership and use were examined:

- **Building age**: The exact construction date of only the two houses were known. The ages of the remaining have been approximated by their users. Since the previous owners were generally known, ages of the buildings were estimated by the interviewees. 1 of the houses was 65 years old, 1 was 69 years old, 8 were between 100-149 years old, 7 were between 150-200 years old. Overall, most of the structures have been present for more than 100 years.

- **Duration of inhabitance:** 3 of the users have been living in their current houses for up to 10 years, 2 for 11-39 years, and 12 for more than 40 years. As seen, duration of inhabitance for the current users varies. However, it is learned that 2 of the users who have been living there for less than 10 years were born in their current houses, then moved to another place for marriage and work reasons and returned to live on their own after the loss of their parents (who have been using these houses). The remaining 1 of these 3 users, who has been living in her current house for 10 years, was born in another traditional dwelling in this neighborhood. After leaving Milas for work reasons, she returned to her family house, where she lives today. As a result, it is possible to state that all the users have resided in Milas and especially in this neighborhood for at least 20 years.

- **Frequency of use:** 15 of the houses were used during the whole year, 2 of the houses were used seasonally (except summertime). While majority of the houses are used during the year, 2 of them are not used in a 2–3-month period in summer. These households use their summerhouses in other districts of Muğla. When examined in detail, it is learned that these 2 users do not make this choice due to the thermal comfort conditions in summer.

- **Number of users:** 4 of the houses were used by 1 person, 10 were used by 2 people, 2 were used by 3 people, 1 was used by 5 people. To elaborate the exception with 5 users, 4 people (a family with 2 children) are using the ground floor and 1 person is using the upper floor since the building was reorganized as two separate flats on each floor. These two households are the two different generations of the same family. Overall, most of the houses are used by maximum 2 people.

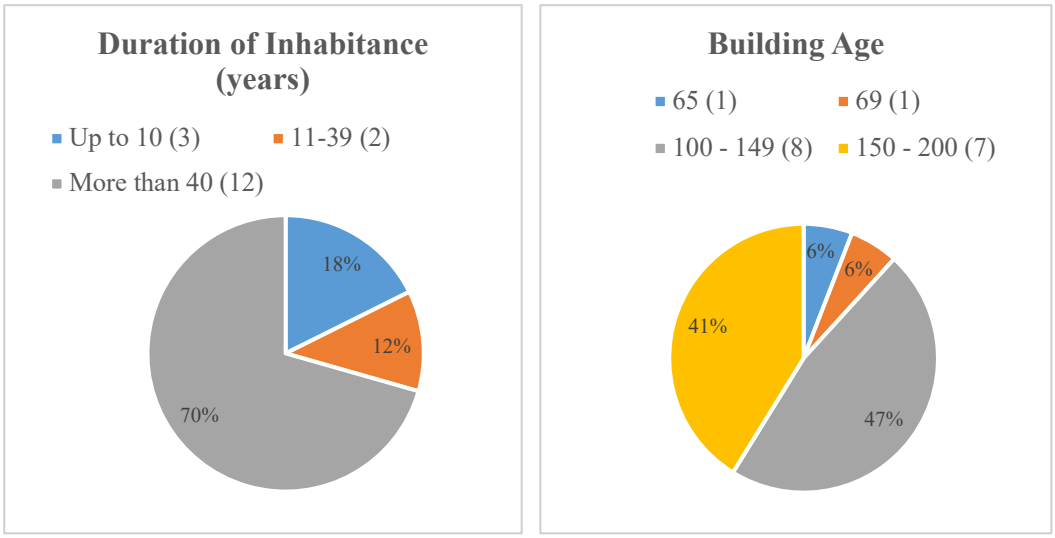


Figure 114 Building Ownership and Use - Duration of Inhabitance and Building Age

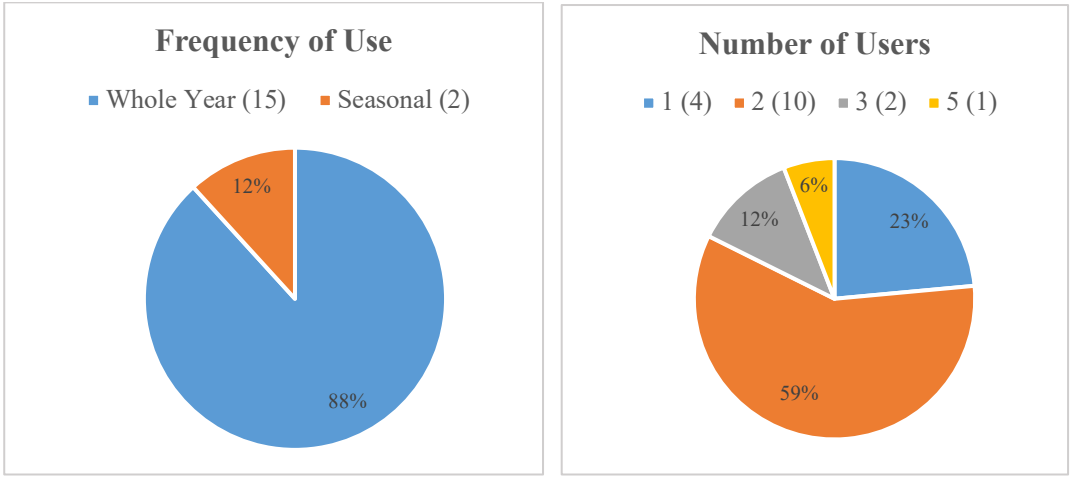


Figure 115 Building Ownership and Usage - Frequency of Use and Number of Users

Table 18 Building Ownership and Usage - Studied Houses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Building age	+100	≈ 150 - 200	+100	≈ 150 - 200	65	≈ 200	≈ 200	≈ 150 - 200	+100	69	+100	+100	+100	≈ 200	+150	+100	+100
Duration of inhabitance	≈ 50	4	27	51	10	70	≈ 50	54	53	54	3	62	48	56	66	23	51
Building ownership	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner	Owner
Frequency of use	Whole year	Whole year	Whole year	Whole year	Whole year	Whole year	Whole year	Whole year	Whole year	Whole year	Seasonal	Whole year	Seasonal	Whole year	Whole year	Whole year	Whole year
Number of users	1	2	1	3	2	2	1	2	2	2	2	1	2	1 + 4	2	3	2

Spatial and Thermal Comfort Conditions: Building Scale

In winter, users heat their houses with various sources, and often use multiple of them. These heating methods include air conditioner, stove, electric heater, and catalytic stove. According to the results, 1 of the households use only air conditioner, 5 use only stove, 2 only use electric heater, 3 use air conditioner and stove, 3 use air conditioner and electric heater, 1 use stove and electric heater, 1 use air conditioner and catalytic stove, and 1 use air conditioner, stove and electric heater. Overall, air conditioner is used by 9, stove is used by 10, electric heater is used by 7, and catalytic stove is used by 1 household.

Stove is the most traditional and preferred heating source; however alternative heating methods began to be used since mostly elderly live in these houses and face difficulty in performing the work of the stove. It is stated by the users that these alternative methods for heating both remain insufficient and increase the costs. As a solution to this, there are examples of cases where the upper floor is not used, or in order to prevent heat loss between the two floors, there are examples where door or shutter-like additions are made at the beginning of the stairs on the ground floor.

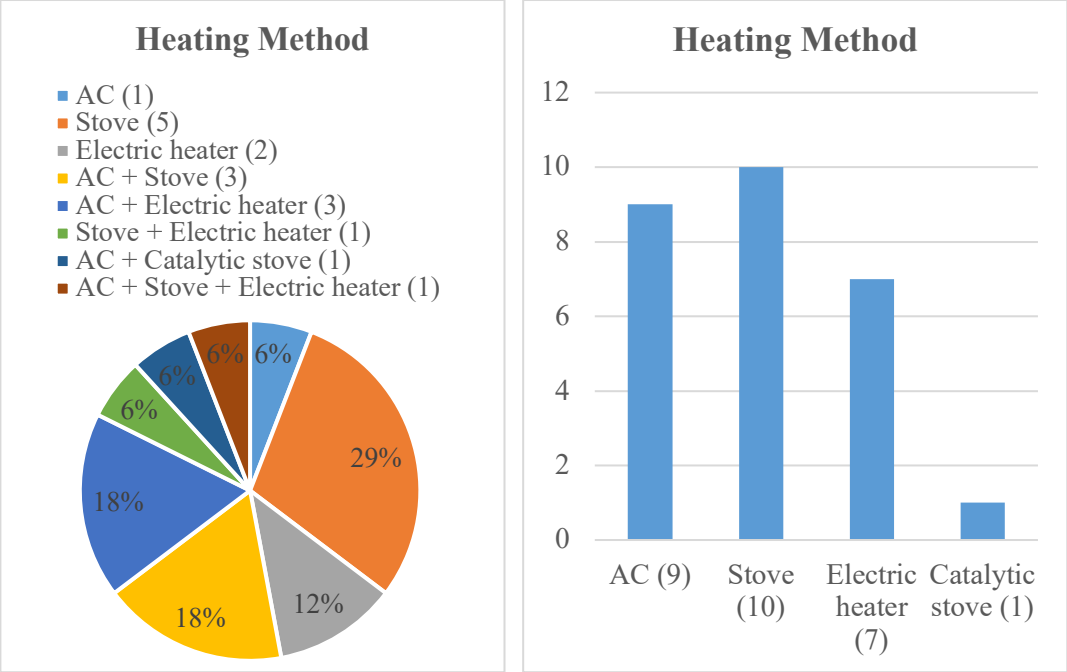


Figure 116 Heating Method - Distribution

In summer, users cool off with both natural and artificial sources. These cooling methods include ventilation, air conditioner and ceiling fans. To elaborate ventilation, users keep their windows and doors open and spend most of their time in their courtyards. According to the results, 5 of the households use ventilation, 11 use ventilation and air conditioner, and 1 uses ventilation, air conditioner and ceiling fans. Overall, ventilation is used by 17, air conditioner is used by 12, and ceiling fan is used by 1 household. Every user benefit from natural sources (ventilation) yet uses alternative methods when the weather gets too hot.

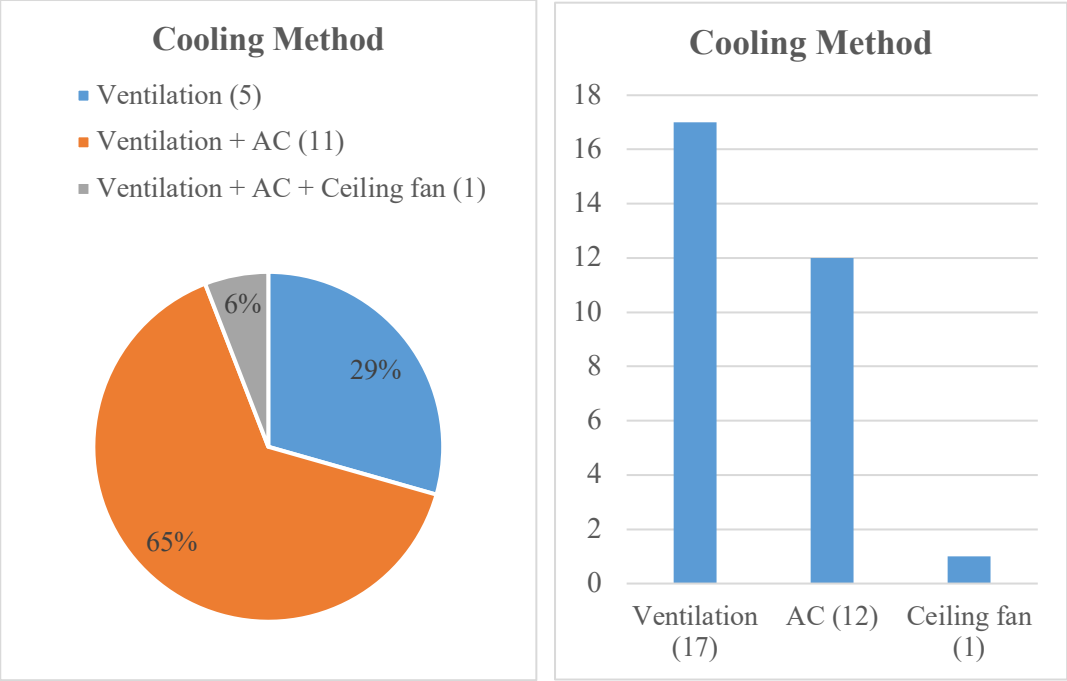


Figure 117 Cooling Method - Distribution

According to the users, the indoor thermal comfort conditions of the houses vary regarding the seasons. 14 out of 17 users stated that their houses become less comfortable in winter, and the remaining 3 stated that their houses become less comfortable in summer. Those who think that winter is less comfortable mentioned the problems they have in heating their houses and expressed that they cannot do the work required to use the stove (i.e., carrying coal or wood, cleaning the dust, constantly checking the fire, etc.) due to their age, therefore they prefer alternative, more expensive, yet insufficient heating methods compared to the stove. Problems are also experienced in the installation of the air conditioners, which is one of these alternative methods.

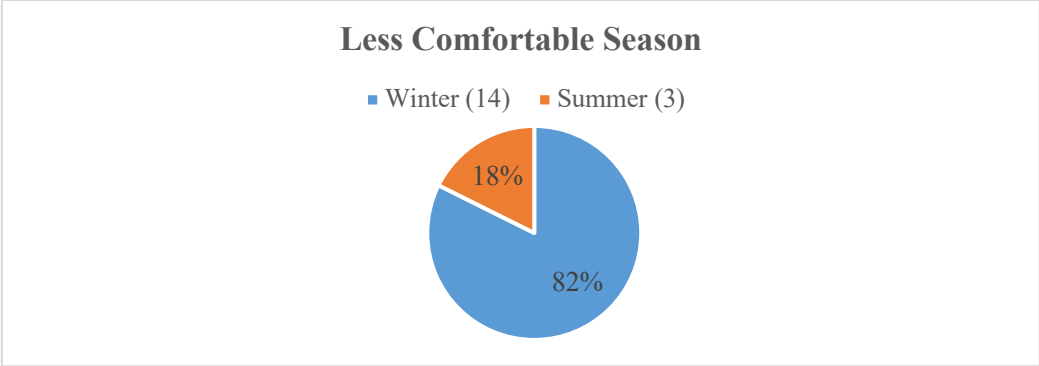


Figure 118 Less Comfortable Season - Distribution

All the participants stated that the spaces in their houses get enough light, are adequately ventilated. 4 out of 17 users pointed out that they have been experiencing dampness problems inside their houses. One of them stated that this problem arose due to the rainwater leaking into the house since she cannot repair the roof, one of them stated that this problem began after the roadwork in front of her house, and the other two stated that they started to have dampness problem after the interventions in their houses. Except for the user facing this problem due to the condition of her roof, other users make periodic and temporary repairs with plaster and paint in order to cover the damage caused on the walls, yet they continue to have problems related with dampness.

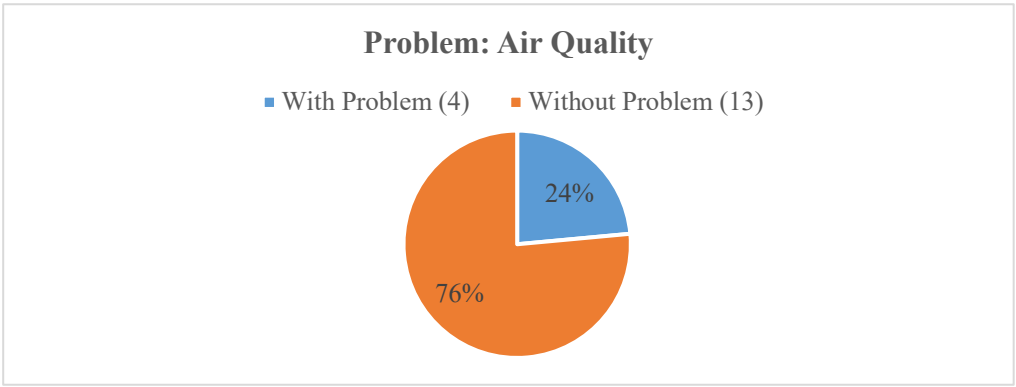


Figure 119 Problem: Air Quality - Distribution

As for the adequacy of the number of rooms or spaces in the houses, all the users stated that they were ‘adequate’. However, 5 out of 17 said ‘adequate but would be nice to have one more’. None of the users giving this answer clearly indicates that the number of spaces is ‘inadequate’. The reason for this is that they are content with living in their houses and the number of people currently residing in the houses are mostly 1 or 2. When the functions to be assigned to the additional spaces are examined, it has been determined that 1 use thinks that it would be nice to have a guest room and a semi-open space in the courtyard, 1 user thinks that it would be more comfortable if she had a separate room for her daughter, 2 users need a kitchen inside the house (which has been resolved outside the house), and 1 user wants a bathroom on the first floor due to their age and the difficulty in using the stairs.

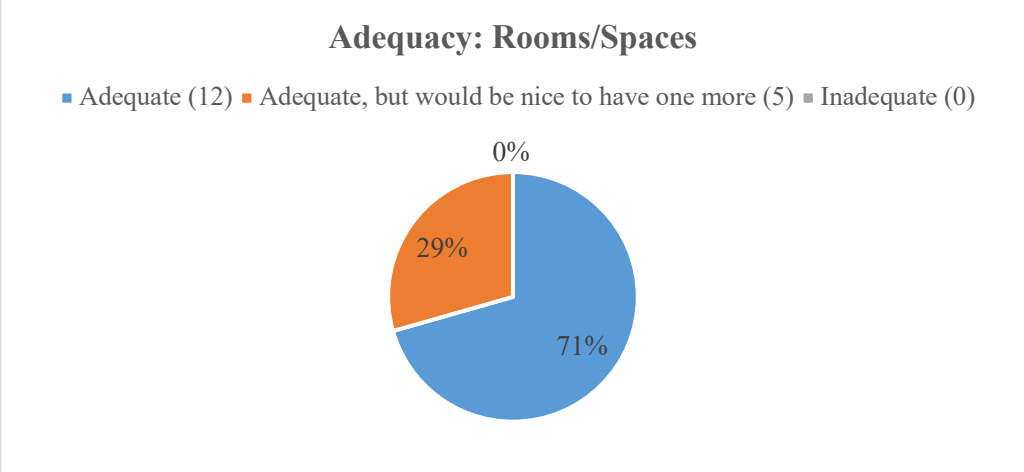


Figure 120 Adequacy: Rooms/Spaces - Distribution

Table 19 Spatial and Thermal Comfort Conditions: Building Scale - Studied Houses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Heating method	AC + Catalytic stove	AC + Stove	AC + Stove	Electric heater	AC	AC + Electric heater	Stove	Stove	Electric heater	AC + Stove + Electric heater	Stove	AC + Stove	AC + Electric heater	Stove	Stove + Electric heater	AC + Electric heater	Stove
Cooling method	Ventilation + AC	Ventilation + AC	Ventilation + AC	Ventilation + AC	Ventilation	Ventilation + AC	Ventilation	Ventilation + AC	Ventilation + AC	Ventilation + AC	Ventilation + AC + Ceiling fan	Ventilation + AC	Ventilation	Ventilation	Ventilation	Ventilation + AC	Ventilation + AC
Less comfortable season	Winter	Winter	Winter	Winter	Winter	Winter	Winter	Winter	Summer	Winter	Winter	Winter	Winter	Winter	Winter	Summer	Summer

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Does your house get enough light?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is your house adequately ventilated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do you experience any problems related with the air quality inside your house?	Yes	No	Yes	Yes	No	No	No	No	No	No	No	No	No	Yes	No	No	No
Is the number of spaces/rooms in your house adequate?	Yes	Yes	Yes	Yes, but would be nice to have one more	Yes	Yes, but would be nice to have one more	Yes	Yes, but would be nice to have one more	Yes	Yes	Yes	Yes, but would be nice to have one more	Yes	Yes	Yes	Yes	Yes

Made Interventions

1. **Renewal of surface coverings (roofing):** 13 out of 17 users had their roofs renewed or repaired. These users have replaced the damaged materials with the same type of materials or renewed by using the existing ones.

2. **Courtyard gate:** 12 out of 17 users have either renewed or replaced (with other materials) their courtyard gates. The reason for this intervention was stated as the deformation of the doors and need for security. When the houses of these users are examined, it is seen that the entrance of most of these main buildings are from the courtyard. However, this intervention is also carried out in examples where the entrance to the main building is provided through the street. Users who changed the material of their courtyard gates did not change their sizes, but only their materials. 2 of these remaining 5 users who did not change their courtyard gates live in buildings that were constructed in 1950s. The gates of these buildings are in their original form due to their materials and conditions. Houses of the remaining 3 users (out of 5) take their entrance to the main building from the street and do not have any doors opening from the street to their courtyard.

3. **Room function:** 11 out of 17 users have changed the function of a room in their houses. One of these users have changed the function of their ground floor, which was originally used as barn. After the interventions, they re-functioned the spaces on the ground floor as a room and a kitchen. Rest of the users re-functioned spaces that were originally used as rooms as kitchens (which do not exist in the original layout). The underlying reasons for this intervention are the need for ease of use and changing living standards. As a. result, one of the rooms on the ground floor are started to be used as kitchen.

   Addition of space (bathroom): 11 out of 17 users added bathrooms to their houses. Bathrooms, which are originally located outside the main building,

were included in the main building due to changing living standards and to provide ease of use. These additional spaces are generally constructed with reinforced concrete and have an entrance through the main building.

Additions to courtyard (coverings): 11 out of 17 users added cover to their courtyards. Considering the reasons for this, it is primarily to provide ease in circulation to the service buildings outside the main building in rainy weathers and to provide comfort in the use of courtyard in sunny or rainy weather conditions. When the materials of the coverings are examined, it is seen that there is a tendency towards the use of metal or plastic materials or pergolas.

4. **Materials of surface coverings (flooring):** 10 out of 17 users have changed the flooring of at least one of the spaces in their houses. this intervention was mostly carried out on timber floors, and it is seen that tile or laminated flooring were preferred instead. The reasons for this intervention are the costs of replacing the deformed timber elements, the difficulties experienced in cleaning the timber elements and the desire to 'modernize' the space. In addition, it can be stated that the spaces where the change of materials of flooring is seen most are the ground floor rooms that are re-functioned as kitchens.

   Additions for security (iron bars or shutters): 10 out of 17 users have added iron bars or shutters to the windows of their houses. This intervention, which is carried out for security reasons, can be seen on the windows of the ground floors.

5. **Renewal of surface coverings (ceiling):** 9 out of 17 users have had at least one of the ceilings in their houses renewed as the timber elements were deformed over time.

Renewal of wet areas (kitchen): 9 out of 17 users have renewed their kitchens.

Renewal of wet areas (bathroom): 9 out of 17 users have renewed their bathrooms.

6. **Renewal of openings and frames (windows):** 8 out of 17 users renewed their window frames since the timber elements were deformed over time.

   Renewal of openings and frames (doors): 8 out of 17 users renewed their doors since the timber elements were deformed over time.

7. **Sizes of openings and frames (doors):** 7 out of 17 users have changed the door sizes in the houses they live in. These changes are not preferred for the doors located inside the houses but are seen from the ones in the façade layouts. While relocating or expanding the door was preferred according to the change in usage, addition of a door was made for security reasons.

   Materials of openings and frames (doors): 7 out of 17 users have changed the material of one or more doors in their houses. Instead of the original timber materials, pvc (for the doors inside the house) or metal (for the entrance doors) elements was generally preferred.

   Renewal of surface coverings (flooring): 7 out of 17 users renewed the floorings of at least one of the spaces in their houses since they were deformed.

   Addition of space (semi-open space): 7 out of 17 users added a semi-open space to their houses. These additions were made with plastic or metal cover

coats on courtyards. In other cases, semi-open spaces were created by extending the roofs on the courtyard facades or by using the spaces created under the additions to the upper floors. Since these additions are reinforced concrete, the continuation of the use of reinforced concrete is seen in the formation of semi-open spaces. The reason for all these interventions is to provide and facilitate the use of the courtyard in rainy or very sunny weather conditions.

Addition of space (kitchen): 7 out of 17 users added kitchens, which were not originally located in the main building or were solved only with water sources in the courtyard. These additions were built with reinforced concrete, either as an additional structure with an entrance from the main building or a separate unit in the courtyard.

8. **Sizes of openings and frames (windows):** 6 out of 17 users have changed the window sizes in their houses. The purpose of preventing heat loss underlies the changes made by reducing the sizes of windows or covering them. In addition to these, the reason for adding, expanding or relocating windows is to create the openings suitable for the reorganized units in the changed interiors.

   Materials of openings and frames (windows): 6 out of 17 users have changed the materials of the windows in their houses. It is seen that pvc is used instead of timber window frames. The reasons for these changes are providing ease of cleaning and preventing heat loss. One of the users who made this change expressed that she regretted later. She intends to replace the pvc window frames with timber ones, as they were, if she has the opportunity.

Materials of surface coverings (ceiling): 6 out of 17 users have changed the materials used on the ceilings of one or more spaces in their house. It was learned that the materials of the ceilings, which were originally timber, were changed on the grounds that they were deformed. As a result, the users believe that this change provided them ease of cleaning.

Addition of space (room): 6 out of 17 users added rooms to their houses. while the added rooms are generally used as bedrooms, examples used as living room are also seen. Reinforced concrete is used in these interventions, which are carried out due to changing living conditions and need for space over time. Room additions used as bedrooms can be seen in examples where a room on the ground floor is refunctioned as a kitchen.

9. **Room size (expansion):** 5 out of 17 users preferred to expand one of the rooms in their houses. These changes were made by either by removing the wall between the two rooms on the ground floor, or by incorporating a room into areas such as sofa or *taşlık* to obtain a larger living room.

   Removal of *ocak*: 5 out of 17 users have built a wall over the *ocak*s in their houses. It has been learned that these changes were made to provide ease of cleaning. In addition, it has been determined that the *ocak*s that are not covered and are currently visible in the building are not in use.

10. **Additions to prevent heat loss:** 3 out of 17 users have made additions to the beginning or middle parts of the stairs in their houses in order to prevent heat loss between floors. One of these users installed electric shutters, one made a door with layers of linoleum, and one added a pvc door. It has been learned that these supplements are very effective in preventing heat loss.

Materials of surface coverings (roofing): 1 out of 17 users have changed the materials of their roof. However, it should be noted that this building is a reinforced concrete structure with only the subbasement remaining intact and built on traditional ruins.

Table 20 Made Interventions - Studied Houses

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
sizes of openings and frames	windows	•							•					•	•		•	•
	doors	•	•	•	•		•										•	•
materials of openings and frames	windows									•								•
	doors				•		•					•	•	•			•	•
renewal of openings and frames	windows	•	•	•	•				•			•		•				•
	doors	•	•	•	•				•			•		•			•	
materials of surface coverings	roofing																	•
	ceiling						•					•	•		•			•
	flooring	•			•	•				•	•	•	•	•	•			•
renewal of surface coverings	roofing	•	•	•	•		•	•		•	•	•	•	•		•	•	
	ceiling	•	•	•		•	•	•	•			•	•	•				
	flooring	•	•	•		•			•		•	•						•
room size (expansion)		•				•					•	•					•	•
room function		•	•		•		•	•	•	•		•		•			•	•
addition of space	room		•		•						•		•		•	•		
	semi-open space					•	•	•			•		•		•	•	•	
	wet area (kitchen)			•				•				•	•	•	•	•		
	wet area (bathroom)	•	•	•			•		•			•	•	•	•	•	•	•
renewal of wet areas	kitchen	•	•	•		•				•		•	•	•				
	bathroom	•		•		•	•					•	•			•	•	•
removal of cracks							•		•		•				•			
additions to prevent heat loss (shutters)		•	•															
additions for security (iron bars or shutters)						•				•	•	•	•	•	•	•	•	•
additions to courtyard (coverings)			•	•	•	•	•	•		•	•	•		•	•			
courtyard gate		•	•		•		•	•	•	•			•	•	•	•	•	•

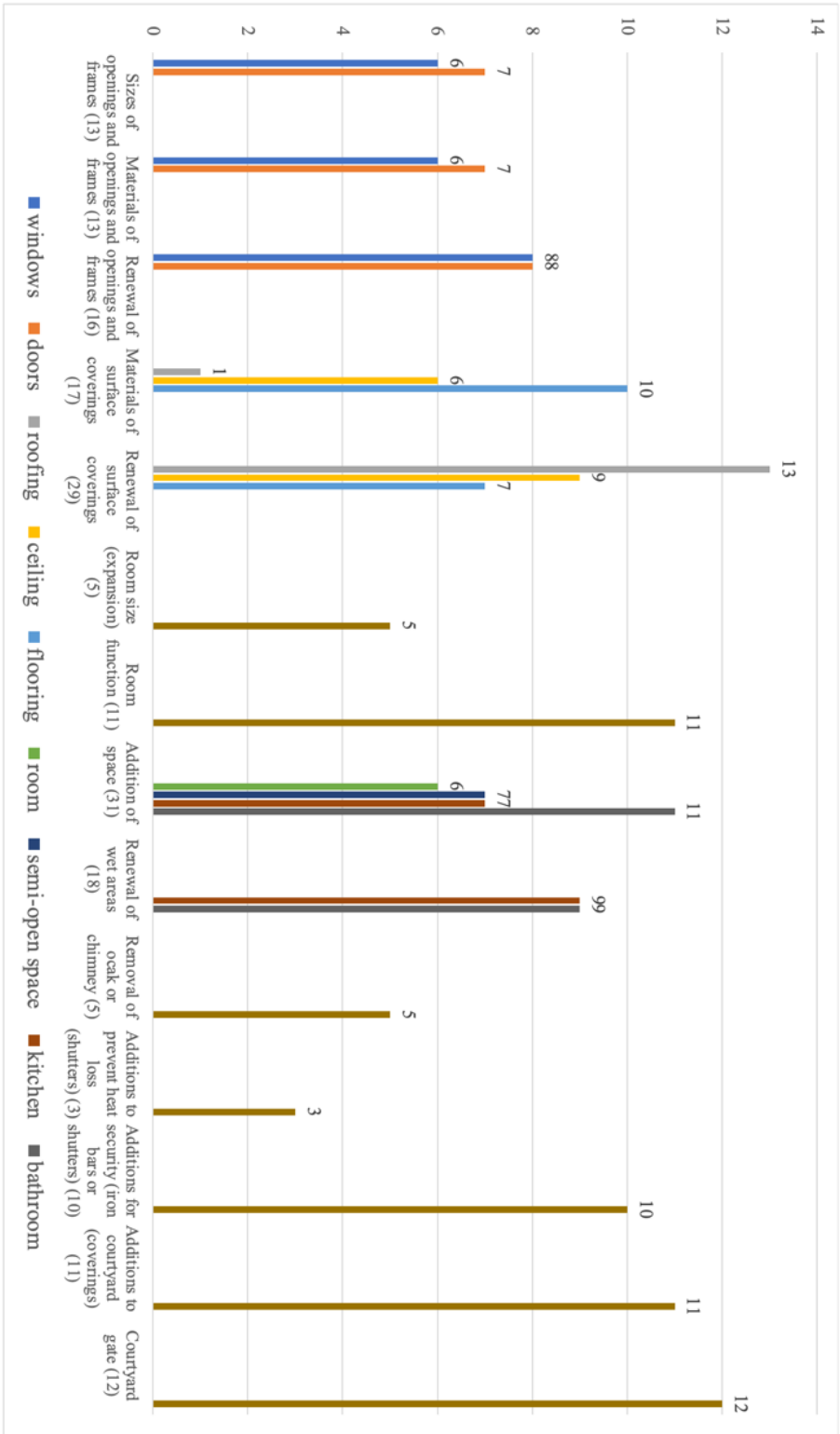


Figure 121 Made Interventions - Studied Houses

Desired Interventions

1. **Materials of openings and frames (windows):** 6 out of 17 users want to change the materials of the window frames in their houses. They want to replace the authentic timber window frames with pvc in order to prevent heat loss, to provide ease of cleaning, to increase security, and to 'modernize' the house.

   Materials of openings and frames (doors): 6 out of 17 users want to change the materials of the doors in their houses. They want to replace the authentic timber doors with metal (for the doors opening to the street) or pvc (for the doors located inside the house) ones in order to prevent heat loss, to provide ease of cleaning, to increase security, and to 'modernize' the house.

2. **Materials of surface coverings (flooring):** 4 out of 17 users want to change the materials of the floors of one or more spaces in their houses. One of these users want to cover the concrete parts of the flooring with tiles for cleaning reasons, and the other wants to replace the timber flooring with laminated flooring for cleaning and 'modernizing' reasons.

   Heating method (natural gas): 4 out of 17 users want to use natural gas for heating their houses. for this, they expect the necessary infrastructure to be provided in their neighborhood. Considering that the users who gave this answer are over 60 years old, the difficulties they experience in heating their houses come to the fore.

3. **Materials of surface coverings (ceiling):** 3 out of 17 users want to change the materials of the ceilings in their houses since they became deformed. These users believe that this intervention will provide ease of cleaning.

Renewal of surface coverings (ceiling): 3 out of 17 users want to renew the authentic timber ceilings in their houses since they became deformed. These users believe that this intervention will provide ease of cleaning.

'Modernize': 3 out of 17 users want to 'modernize' their houses. It is understood that they accept timber materials as 'old' or 'old-fashioned' and agree that the use of pvc or metal, which has become widespread with changing living conditions, as 'new' or 'modern'. Among the interventions to be made in this context, common answers include 'replacing window frames with pvc' and 'using laminated flooring'. Some of the issues that should be noted in this regard are that these users are middle-aged and that these houses, where they once lived, are currently used by family elders. Users who gave this answer stated that they want to live in these houses again when the time comes and that they have a desire to 'modernize' these buildings.

4. **Renewal of openings and frames (windows):** 2 out of 17 users want to renew the window frames of their houses since they became deformed. These users believe that this intervention will provide ease of cleaning.

   Renewal of openings and frames (doors): 2 out of 17 users want to renew the doors in their houses since they became deformed.

   Renewal of surface coverings (roofing): 2 out of 17 users want to renew the roofs of their houses since they became deformed. The current state of the roof of the house where one of these users live can be defined as severely damaged. The structurally unstable roof is in a very dangerous condition. There are holes on the roof which cause heat loss and dampness problem in the house due to air passage and water leakage.

   Room size (expansion): 2 out of 17 users want to expand a room in their house. The spaces that these users want to expand are the living rooms on the ground floors.

Addition of space (room): 2 out of 17 users stated that they need an additional room in their house. Although these users did not express clearly and definitely that they need it, they say indicated that having an additional room will provide convenience and comfort in use. One of these users stated that a guest room for their visiting family members would be very useful, while the other stated that a bedroom or a workroom would be good for her daughter (29) to have her own space.

5. **Styles of openings and frames (windows):** 1 out of 17 users wants to replace the guillotine-style windows with casement due to difficulty in use.

   R**enewal of surface coverings (flooring):** 1 out of 17 users wants to renew their timber flooring since they are deformed. This user believes that this intervention will provide ease of cleaning.

   Room function: 1 out of 17 users wants to change the function of one of the rooms in their house. Although, they have been using this space as kitchen for a long time, they could only use this space for storing their goods and utilities. This user wants to install the sink (which is currently located on the open sofa) inside this space and refunction it as kitchen.

   Addition of space (semi-open space): 1 out of 17 users wants to add a semi-open space in their courtyard in order to be able to use the courtyard in rainy weathers.

   Addition of space (bathroom): 1 out of 17 users wants to add another bathroom on the first floor of their house since the users are above 60 years of age and have difficulty in using the stairs.

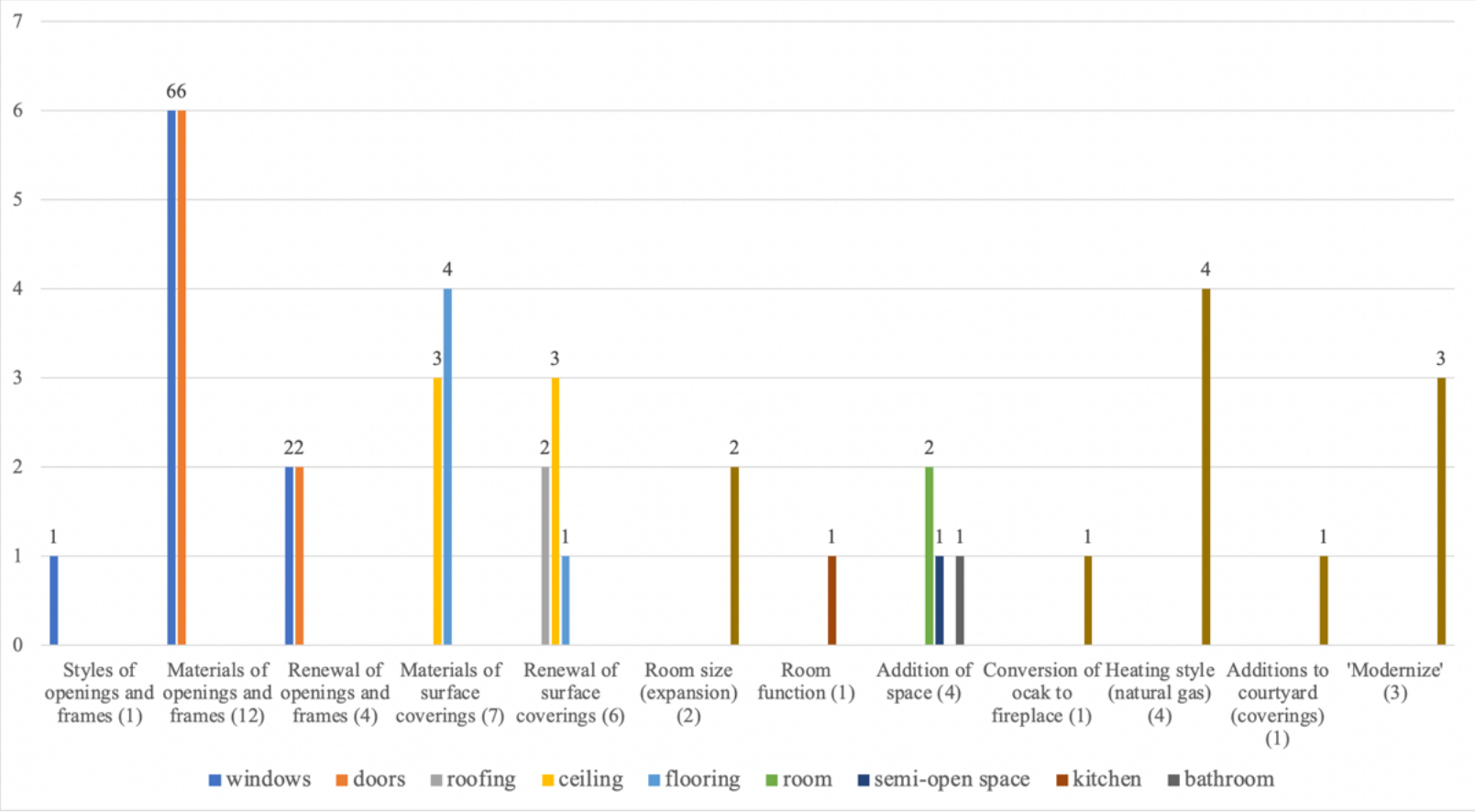
   Conversion of *ocak* to fireplace: 1 out of 17 users wants to convert the *ocak* in their house to fireplace since it is not in use and they believe that they can benefit from it as a heating source.

Additions to courtyard (coverings): 1 out of 17 users wants to add covering to their courtyard. Considering the reasons for this, it is primarily to provide ease in circulation to the service buildings outside the main building in rainy weathers and to provide comfort in the use of courtyard in sunny or rainy weather conditions.

Table 21 Desired Interventions - Studied Houses

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
sizes of openings and frames	windows																	
	doors																	
styles of openings and frames	windows																	
	doors																	
materials of openings and frames	windows		•					•				•						
	doors		•					•				•	•					
renewal of openings and frames	windows				•		•						•	•				
	doors				•		•							•				
materials of surface coverings	roofing																	
	ceiling							•						•	•			
	flooring				•			•						•	•			
renewal of surface coverings	roofing							•							•			
	ceiling						•	•						•	•			
	flooring					•												
room size (expansion)									•				•	•				
room function									•									
addition of space	room				•		•											
	semi-open space				•													
	wet area (kitchen)																	
	wet area (bathroom)													•				
renewal of wet areas	kitchen																	
	bathroom																	
conversion of ~~cook~~ to fireplace			•															
heating method (natural gas)						•												
						•												
						•												
additions to courtyard (coverings)							•											
'modernize'		•												•	•			

Figure 122 Desired Interventions - Studied Houses



Most Valuable and Problematic Features

17 interviewees were asked about the most valuable and most problematic feature of their houses. For the most valuable feature: 5 people answered as 'courtyard', 3 people as 'peacefulness', 3 people as 'belonging to me', 2 people as 'memories', 2 people as 'location', 1 person as 'detached', 1 person as 'architectural features'.

When the most valuable feature of the buildings is examined, it is seen that some of the answers cover tangible and some cover intangible aspects. Tangible ones include 'courtyard', 'central location', 'detached' and 'architectural features' and these constitute 9 out of 17 answers in total. The remaining 8 answers consist of 'peacefulness', 'belonging to me' and 'memories', which are intangible features. Those who stated tangible features in the first place during the interviews also gave an intangible answer such as 'memories' but (based on the research objectives) the first answer was considered. Those who gave the answer 'courtyard' stated that they understood the importance of having a private open space even more during the pandemic. As a matter of fact, they also indicated that during the pandemic, the number of boarding visits made by other members of the family (who live in apartments in the city) to traditional dwellings has increased.

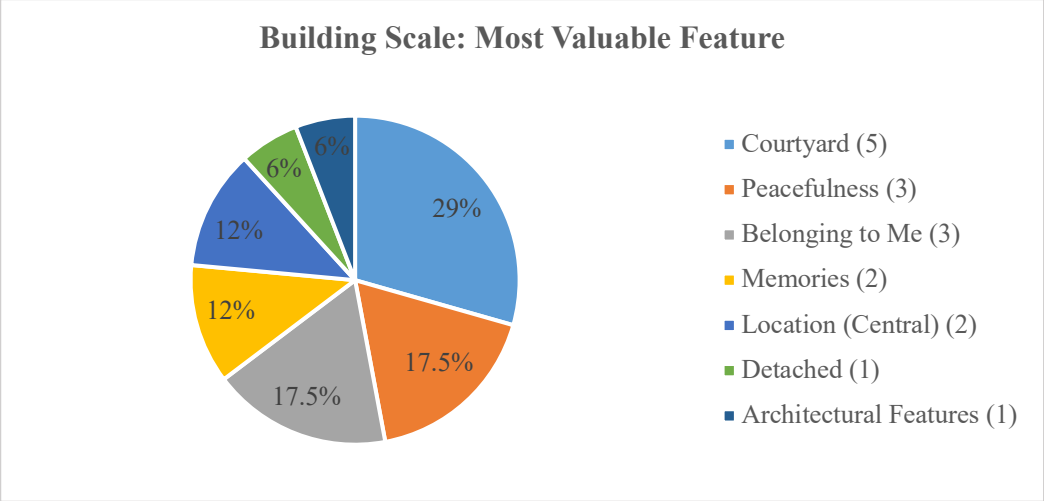


Figure 123 Building Scale: Most Valuable Feature - Distribution

For the most problematic feature: 4 people answered as ‘conservation restrictions’, 4 people as ‘cleaning’, 3 people as ‘inconvenience in use’, 3 people as ‘heating’, 1 person as ‘noise’ and 2 people as ‘nothing’.

According to the interviewees, the most problematic feature of the houses emerges as the constraints regarding their conservation. This is followed by the difficulties in cleaning, inconvenience of the spatial configuration of the building and difficulty in heating, respectively. As noticed in all the interviews, the users of the traditional dwellings are aware of the value of their houses and that they are subject to certain restrictions due to their registration status. The users of the studied traditional dwellings, live in these buildings by preference, not due to financial constraints. For this reason, these problems mentioned about the buildings, which touch upon rather basic needs, should be dealt seriously and urgently.

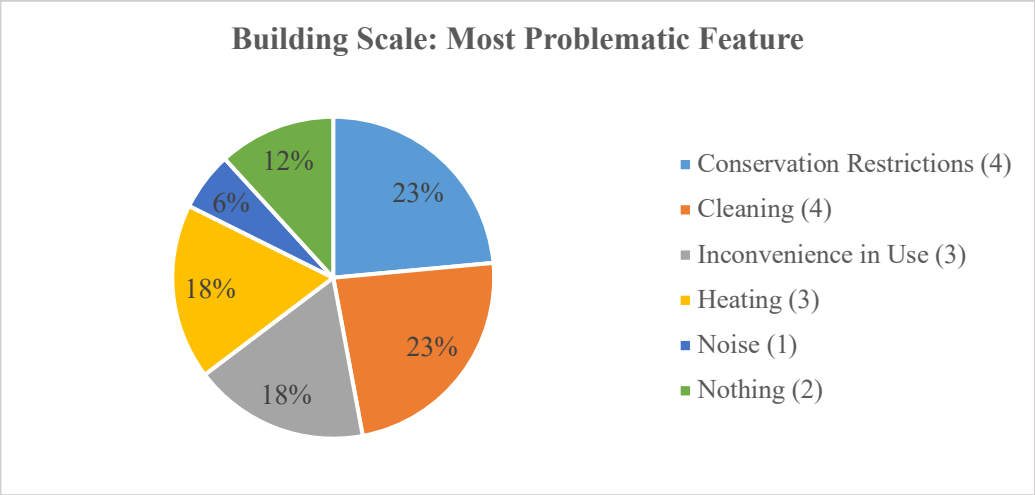


Figure 124 Building Scale: Most Problematic Feature - Distribution

Spatial Comfort Conditions: Neighborhood Scale

All participants find their neighborhood safe, yet they also mention the unpleasant incidents they have experienced recently. It was noticed that the users made their

evaluations on this matter with reference to their previous habits/ways of living. Most respondents stated that they used to leave their street doors open until the late hours, however they are aware that they should act more carefully now. It should be mentioned that at the time these interviews were conducted, there were some incidents of theft and disturbance that overshadowed the security at the neighborhood, nevertheless all the interviewees believe that their neighborhoods are safe. In this regard, iron bars and shutters on the openings were examined as additional data. As a result, it was seen that 9 out of 17 houses have iron bars or shutters for security purposes.

Although the majority of the respondents gave positive answers about the maintenance of their neighborhoods, 7 out of 17 participants had negative opinions. While one of these 7 people complained about garbage, the remaining 6 users complained about abandoned buildings and building ruins. Relatedly, about the neighborly relations, although all the participants gave a positive response, they stated that the relations are not the same as before. Most of them complained that the children of the deceased families neither continued to use nor sold or rented the houses that are left behind after the death of their acquaintances.

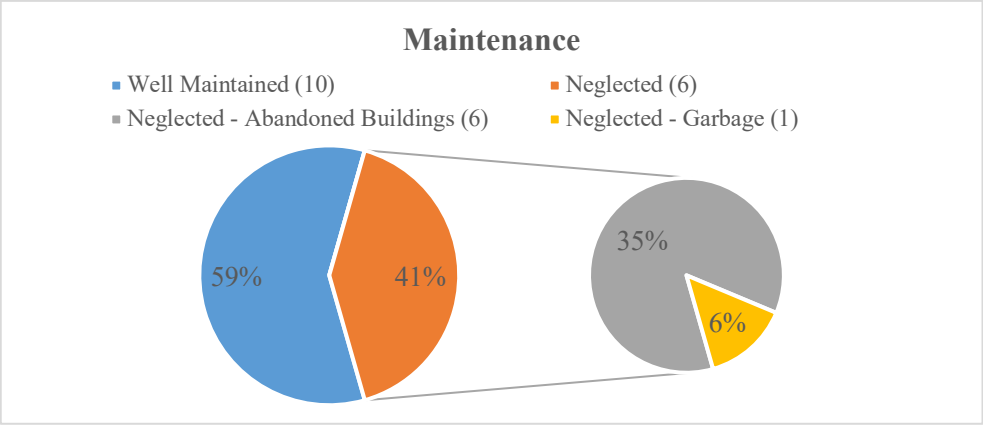


Figure 125 Maintenance - Distribution

All the participants expressed their satisfaction with the neighborly relations, as well as the social reinforcements, facilities and municipal services in the neighborhood they live in. In terms of tourism, they stated that there has always been an interest of the tourists in the region, and this did not bother them. In fact, some of the participants mentioned that their family elders used to offer treats to the visitors.

Table 22 Spatial Comfort Conditions: Neighborhood Scale - Studied Houses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Do you think that your neighborhood is secure?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do you think that your neighborhood is well-maintained?	Yes	Yes	Yes	Yes	No, abandoned buildings	No, abandoned buildings	Yes	Yes	No, abandoned buildings	No, abandoned buildings	Yes	No, garbage	No, abandoned buildings	Yes	Yes	No, abandoned buildings	Yes
Do you think that the neighborly relations are good?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do you think that the social reinforcements and public services in your neighborhood are adequate?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do tourists visit your neighborhood? What do you feel about this situation? What are your opinions?	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered	Yes, I am not bothered

Most Valuable and Problematic Features

17 interviewees were asked about the most valuable and most problematic feature of their neighborhoods. For the most valuable feature: 9 people answered as ‘location’, 6 people as ‘neighbors’ and 2 people as ‘memories’.

Regarding the most valuable feature of the neighborhood, the central location of the neighborhood within the city was mentioned by the majority. However, the following ‘neighbors’ and ‘memories’ answers reflect the nostalgia.

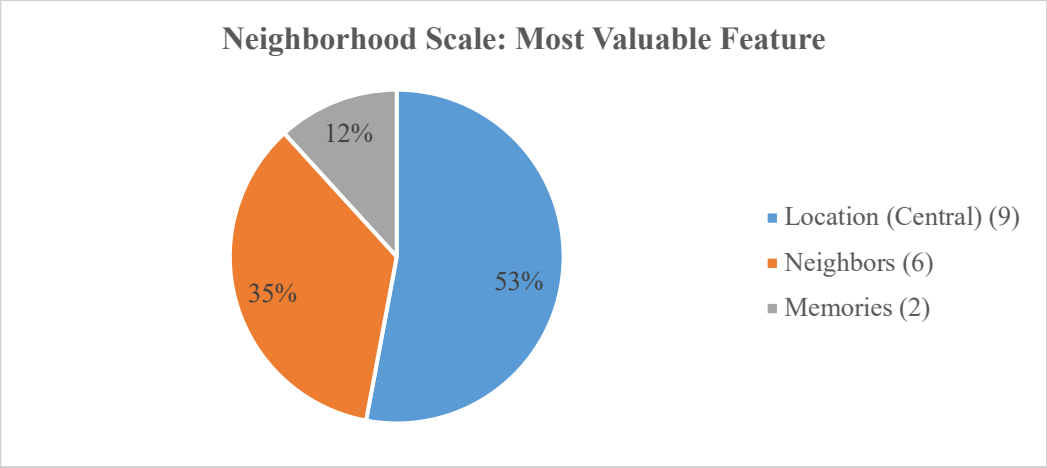


Figure 126 Neighborhood Scale: Most Valuable Feature - Distribution

For the most problematic feature: 6 people answered as ‘absence of people’, 3 people as ‘abandoned houses’, 1 person as ‘noise’, 1 person as ‘garbage’ and 6 people as ‘nothing’.

Therewithal, when the responses for the most problematic feature of the neighborhood are examined, it is seen that the ‘absence of people’, ‘abandoned houses’ and ‘nothing’ answers come to the fore. Apart from these, ‘noise’ and ‘garbage’ responses given by 2 households were in consequence of the location of the studied buildings. To elaborate, ‘noise’ was stated by the user of a traditional building that is located on the main street, and the ‘garbage’ was stated by the user

of a traditional dwelling that is located across the street where most of the garbage of the businesses in the region is dumped. Overall, from the answers given by the users of the traditional dwellings in the inner parts of the residential fabric, it can be deduced that the most obvious problem is the 'traces of abandonment'. In the interviews held with those who gave the answer 'nothing', complaints were expressed about this issue, although no direct answers were given to this question as 'absence of people' or 'abandoned houses'.

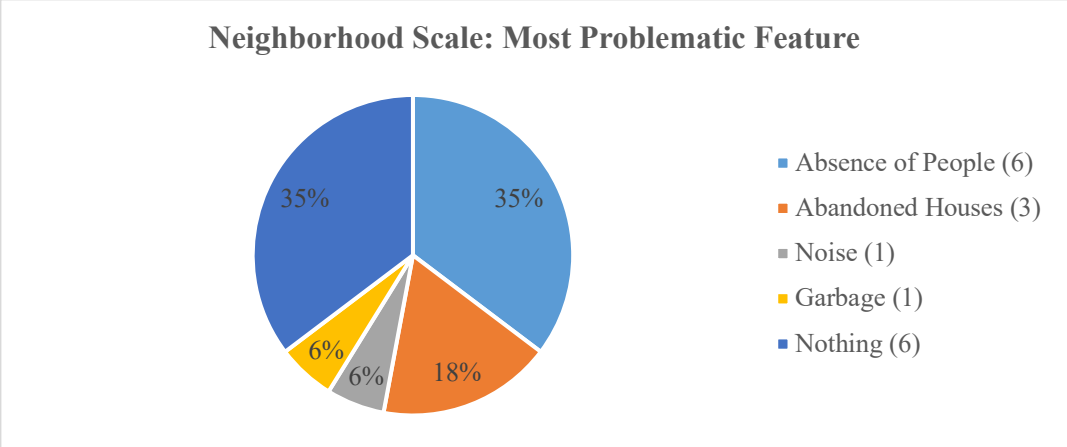


Figure 127 Neighborhood Scale: Most Problematic Feature – Distribution

Sense of Belonging and Willingness to Conserve

As an important parameter, sense of belonging is strongly present in all the interviewees. However, according to the results of the research, it is seen that 1 user is not satisfied with the house they live in. The reason for this participant's dissatisfaction is the conservation restrictions. She stated that she is not content with living in the building where she currently resides, as she could not make the changes she requested. She only uses the first floor of the building and wants to renovate the roof that is severely damaged. However, since she loves her house and thinks that it is valuable, she continues to live under difficult conditions as she cannot realize them due to restrictions.

In addition, among 17 participants, there is a user who answered ‘no’ to both the questions ‘Do you think that your house is valuable?’ and ‘Do you think that your house and its surroundings should be conserved?’. This user also points out the conservation restrictions and the related difficulties they have experienced as the reason for her negative answers. It is learned that they have applied to the concerned authorities about renovating their kitchen and have been rejected twice.

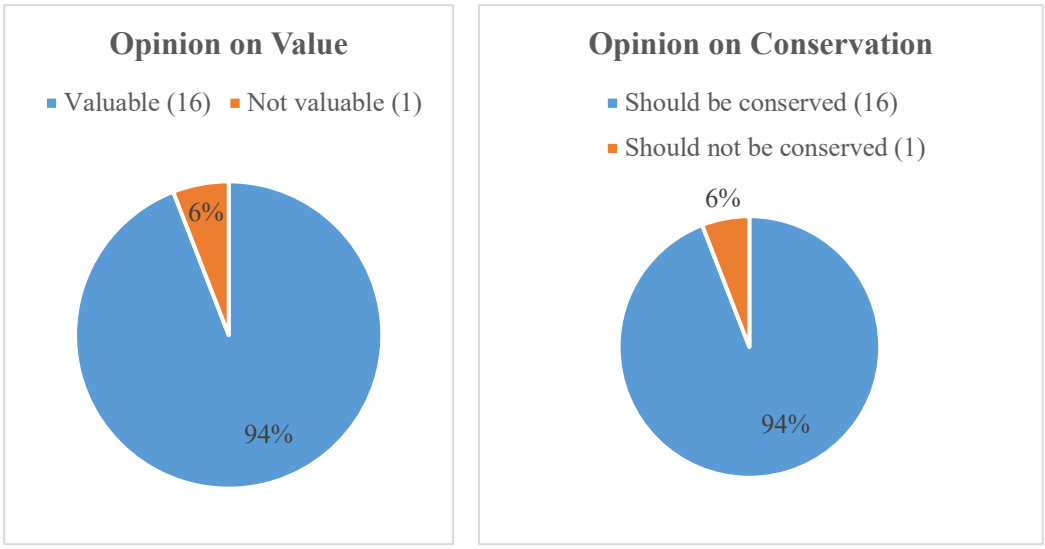


Figure 128 Opinion on Value and Opinion on Conservation - Distribution

Responses to participation in the conservation process are very important. 3 of the 17 people who gave negative response to this issue stated that the reason for their stance is because they believe that ‘nothing will change’. It is of great importance to ensure the hope of this valuable and vulnerable group who is already using these buildings willingly and to keep the will of the those who give positive answers alive.

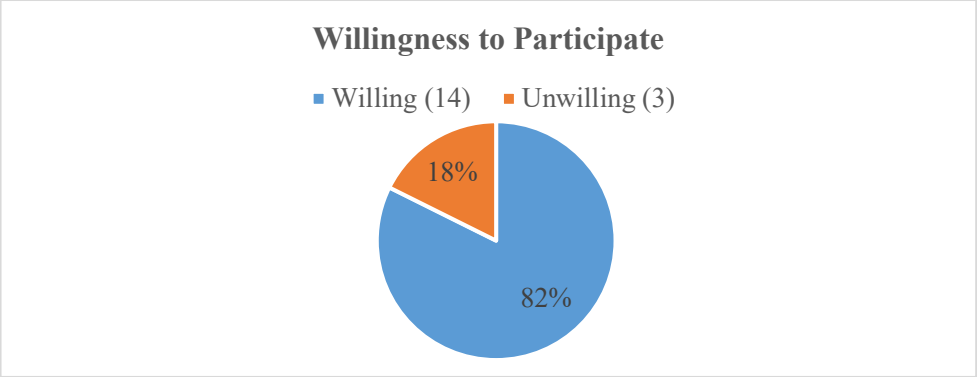


Figure 129 Willingness to Participate - Distribution

All the participants consider that the users have responsibility in conservation of their buildings, however 10 out of 17 believe that the state has a responsibility as well as users. At this point, it should be underlined that the expected assistance from the state or authorities is not material. Everyone who gave this answer believe that the concerned authorities should have the responsibility to provide a basis for facilitating the functioning of fundamental issues such as guidance about the interventions and structural solutions, ease at the process of obtaining permissions for interventions and fulfillment of their basic needs.

All the 17 interviewees stated that if they have sufficient economic resources, they would spend it on the maintenance of the traditional dwellings they currently use, rather than buying a new house.

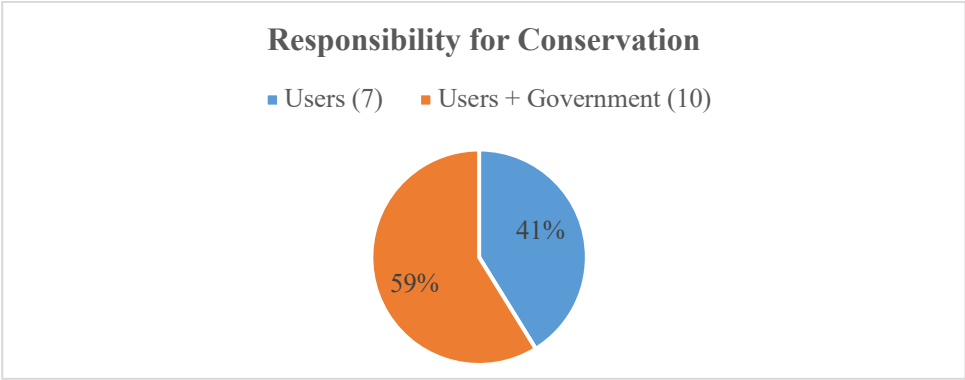


Figure 130 Responsibility for Conservatio

Table 23 Sense of Belonging and Willingness to Conserve - Studied Houses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Are you content with living here?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	**No**	Yes	Yes	Yes
Do you think that you belong here? (sense of belonging)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do you think that your house is valuable?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	**No**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Do you think that your house and its surroundings should be conserved?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Who should be responsible for conservation?	Users	Users + Govt	Users	Users	Users	Users + Govt	Users + Govt	Users + Govt	Users	Users + Govt	Users + Govt	Users + Govt	Users + Govt	Users + Govt	Users	Users + Govt	Users
Would you be willing to participate in an event related with conservation?	Yes	Yes	Yes	Yes	Yes	Yes	No, nothing will change	No, nothing will change	No, nothing will change	Yes	Yes	No, nothing will change	Yes	Yes	Yes	Yes	Yes
If you had enough money, would you spend it on buying a new house or maintaining this house?	This house	This house	This house	This house	This house	This house	This house	This house	This house	This house	This house	This house	This house	This house	This house	This house	This house

Younger Generation Users: Willingness to Move Back

Children of current users of the studied houses were born and raised in these dwellings but they moved to other places (especially to apartments in Milas) for reasons such as education or marriage. On one hand, those of these children whose parents are alive visit their elders and spend time in these houses. On the other hand, those whose parents have passed away neither sell nor use the dwellings of their parents, they regularly come and take care of these houses, spend time with their old neighbors and commemorate the deceased by gathering and sharing memories.

As a part of the site research, interviewees were also questioned about their children's willingness to move back. Within the possibilities, the children of traditional dwelling users (younger generation users) who were born and raised in the studied houses (but currently live in different houses) were asked about their opinions.

Overall, this question was answered by the users of 13 houses. Younger generation users of houses 1, 2, 4, 6, 7, 8, 11, 13, 14 and 16 were interviewed. Although there was not an opportunity to meet the younger generation users of houses 5, 10 and 15, current older generation users delivered their children's perception on the issue on their behalf. The current situation and perception of the younger generation users about moving back to the traditional dwellings they were born and raised in is as follows:

- **Case #1:** A while after the interview with U1, her son and his family (of 4) re-arranged the house according to their needs and moved in. Although she did not want to leave her house, U1 is currently living in an apartment in Milas since they believe it is more secure, and easier to heat and use. It is learned that U1's son has always wanted to move back to the house he was born and raised in.

- **Case #2:** U2's son and his family spend time in this house during the weekdays. When they were asked about their willingness to move here, they

expressed how much they would like to live in this house if they were able to re-arrange the house as they need.

- **Case #4:** Although U4's son lives in an apartment in the near vicinity, he spends his spare time in this house and goes to his home only to sleep. He described this house as the 'liberated zone' and expressed his desire to live here if he were able to make certain changes.

- **Case #5:** U5 stated that her son and his family (currently living in Istanbul) visit this house every year at the first opportunity and always wanted to move here. However, she believes that her son and his family will have difficulties in this 'old' environment and order because they are accustomed to the city life. Also, although they are willing to use this house during their vacations, they find the conservation restrictions challenging.

- **Case #6:** Users describe this house as their 'temple'. While their elder daughter (who had to leave the house due to marriage) were longingly telling their memories here, she could not hold back her tears. She stated that she tries to come to Milas at every opportunity and always wanted to live in this house. Likewise, their younger daughter expressed her love for their home and her desire to live here in the future. However, she complained about the harshness of the restrictions and reflected how this situation challenges her desire to live here.

- **Case #7:** Users' children visit their mother every day. Her daughter expressed her love for this place by stating that even the breath she takes as she enters through the courtyard door is different. When she was asked about her willingness to move back to this house, she stated that it would be very difficult for her to live here as long as the conservation restrictions remain as

strict as it is, no matter how much she wanted to. Should she move here, she wants to 'modernize' the house.

- **Case #8:** U8's son visit this house every other day. Although he could not be interviewed, when U8 was asked about her son's intention to live here in the future, she stated that her son and even her grandchildren would very much like to live here. However, they stated that the conservation restrictions are the biggest obstacle in this regard.

- **Case #10:** U10's children visit this house every other day. Although they could not be interviewed, when U10 was asked about their intention to live here in the future, she stated that both her children and grandchildren would very much like to live here. It is learned that their son had renovated a traditional dwelling in the near vicinity and currently renting the house for a family. However, he is not planning on moving there due to being unable to make changes according to their needs.

- **Case #11:** Although U11 was born and raised in the house she is currently living in, she moved to another city to work. It is learned that her biggest wish was to come back to this house when she retired. Eventually, she and her sister realized their dream two years ago. Before they moved here, they reorganized the house according to their needs. U11 stated that they still want to make changes, but they are unable to do them due to conservation restrictions, which makes the life in this place very challenging.

- **Case #13:** Children of the users visit their parents every other day, and take care of the house when they are away. Three siblings want to move back to their family home, which they left due to marriage and education. During the interviews, they stated that the conservation restrictions is the major obstacle

in this regard since they want to ‘modernize’ the house before they moved back.

- **Case #14:** In this house, which is currently used by two different generations of the same family, the grandmother lives on the upper floor and her grandson and his family live on the ground floor. In this household, it was possible to interview people from these 4 different generations. Although the 1st generation grandmother has difficulties in taking care of herself, she cannot give up this house. She continues to live here, resisting the insistence of her family members to move her to a ‘more comfortable’ place. The 2nd generation mother was born and raised here. She wants to move back here, but states that she needs to ‘modernize’ the house in advance. She also mentioned the difficulties they had experienced due to the conservation status of this house and her plans on returning to this house would not be possible if these conditions remain. Although the 3rd generation son was not born in this house, he grew up in this house. He stated that the memories, relationships and closeness in this neighborhood shaped his preference to live here, but they have to move elsewhere because of the conservation restrictions and being unable to change the spatial configuration of the house as their family expands. The 4th generation granddaughter was born and raised here. When she, who is only 4 years old, was asked what she would want to change in this house, she replied ‘I would like to make my house ‘new’. We are not poor, but we live here, look’.

- **Case #15:** Since U15 is unable to take care of herself on her own, she lives with her son. It is learned that her son always wanted to move back to this house where he was born and raised, but the conservation restrictions make this decision challenging as he has been putting a lot of effort in making interventions to the house for U15’s special needs.

- **Case #16:** U16 is the daughter of U17 whose house was studied as well. U16 stated that she always loved and wanted to return to the house where she was born and raised in, so she moved to a traditional dwelling in the same neighborhood with her family. Since her family (of 3) was previously living in an apartment, they reorganized the house they currently live in according to their habits and needs. It is learned that they still want to make changes, but they are unable to do them due to conservation restrictions, which makes the life in this place very challenging.

In result, it is clearly seen the younger generation users of all 13 houses are willing to move back. In fact, 4 of them have already started living in the houses that they were born or raised in. However, all 13 younger generation users indicated that the conservation restrictions and being unable to make changes challenge their decision on the issue.

Table 24 Younger Generation Users: Willingness to Move Back - Studied Houses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Interviewed Users	•	•		•		•	•	•			•		•	•		•	
Willingness to move back	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	
Conditions affecting on the decision (negative)	Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes		Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes		Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes		Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes	Conservation restrictions and inability to make changes	

CHAPTER 4

INTEGRATING USER NEEDS AND EXPECTATIONS INTO THE CONSERVATION PROCESS OF TRADITIONAL DWELLINGS IN MILAS, TÜRKIYE

4.1 Assessing the Needs and Expectations of the Users of Traditional Dwellings in Milas, Türkiye

Inferences were made from the analysis of the data obtained as a result of the site research. Accordingly, 8 out of 17 of the main buildings are located on one side of the lot (D type) and 16 out of 17 have two floors. Also, the majority (7 out of 17) have street façade with main entrance (A type), but it is seen that courtyard entrances are used rather than street entrances in those houses with courtyard entrance from the street. Except for 3 examples, most of the houses (14 out of 17) have stone masonry ground floor and timber frame upper floor walls. One of these 3 exceptional cases kept the original stone walls up to the plinth level and built a new building on top the remains with reinforced concrete. The other 2 are examples of traditional dwellings from later periods, belonging to the 1950s, which have stone masonry ground floor and reinforced concrete upper floor walls. In fact, they are regarded as the first apartments of the region with their spatial configurations.

Currently, all the studied houses are used for residential purposes. Except one of the 17 houses, all of the houses were originally constructed for residential purposes as well. This exceptional example was originally functioned as a barn, but later used as a residence. Additionally, most common plan scheme in the studied houses is C type

plans with examples in 9 out of 15 houses. According to this type, the sofa is located in the middle and the rooms are located around it.

When the social research results are analyzed, it is possible to see that the majority of the interviewed users are female (14 out of 17), 60 years of age and older (13 out of 17), homemaker or retired (14 out of 17). There are hardly any young people among the users. The users spend most of their time in their houses. Additionally, almost all of them (except one) were born in Milas, yet they all consider themselves as locals.

Majority of the studied houses (15 out of 17) are estimated to be more than 100 years old. All of the users of these traditional dwellings are homeowners. They were either born and raised in these houses and later moved to other places or returned to the houses where they were born after living elsewhere or have been living in these houses for more than 40 years. 15 out of 17 users use these houses throughout the year. Additionally, these houses which were used jointly by several families in the past, are commonly (10 out of 17) used by 2-person households today.

The most common methods for heating houses in winter are stoves, air conditioners and electric heaters. It has been found that in most of the houses, more than one method is used simultaneously for adequate heating. It has been stated by the users that the most traditional, familiar, efficient, and economical heating method is the stove, but this method has been relinquished over time on the grounds that it became difficult to set up and light the stove with advancing age. Although natural methods such as spending time in the courtyard or ventilating the house by leaving windows and doors open are common methods for cooling off in summer, it has been determined that most users use air conditioners when the weather gets hot. As a result, the majority of the users (14 out of 17) stated that their house becomes less comfortable in winter due to increase in heating costs and insufficient heating. In fact, some of the users use only one floor of their houses or move to their children's' places (which are apartments) during the winter for this reason. It is seen that some

of the users who prefer to use only one floor of their houses in winter have installed doors or curtains between two floors in order to prevent heat loss.

If looked at the other issues examined regarding spatial and thermal comfort conditions, all of the users think that their houses receive enough light and are adequately ventilated. Although the majority of the users do not experience problems related with the air quality inside their houses, there are some exceptional cases. It has been determined that the users who have dampness problems inside their house, began to experience these problems either after making interventions to their houses or after the roadwork carried out on the adjacent streets. Additionally, as for the adequacy of the number of rooms or spaces, none of the users gave a negative answer. However, 5 out of 17 users stated that 'it would be nice to have one more'.

Additionally, to determine the needs and expectations of the users, they were asked about their made and desired interventions. Most frequently encountered examples in terms of the made interventions are structure additions. When examined based on the functions of these spaces, the most common added structures are for wet areas. This intervention is followed by renewal of surface coverings and renewal of wet areas. On the other hand, the most frequent answers for the desired interventions were to change the materials of the openings and frames, change the materials of the surface coverings and renewal of surface coverings, respectively.

In other respects, courtyards come to the fore in the first place among the features that users find most valuable in the houses they live in. This answer is followed by the answers of 'peacefulness' and 'belonging to me'. For the most problematic features, answers of 'conservation restrictions', 'cleaning' and 'inconvenience in use' are at the forefront, respectively.

All of the users think that their house and neighborhood are secure, the neighborly relations are strong, and the public services and social reinforcements are sufficient. Again, all users stated that the tourist interest in the region increased over time, and they are not bothered, as a matter of fact they are happy about this situation. Although

the majority (10 out of 17) thinks that their neighborhood is well-maintained, some users complained about abandoned or unused buildings in the area.

Among the features that the users of studied houses find most valuable in the neighborhood where they live, the ‘location (central)’ is the first, the ‘neighbors’ are the second, and the ‘memories’ are the third. On the other hand, the answers of ‘absence of people’, ‘abandoned houses’ and ‘nothing’ take place in the first three rows for the most problematic features of the neighborhood.

In general, the sense of belonging to the region is very high, all of the users define themselves as the locals of Milas. All but one of the interviewed users are satisfied with the house and place they live in. It is learned that the single user who reflected their dissatisfaction gave this answer due to the structural problems that they could not intervene as a result of the conservation status and restrictions on the house they live in. Apart from this, all but one of the users think that the house they live in is valuable. The single user who believes that their house is not valuable stated that she gave this answer due to the conservation restrictions. The same user also thinks that their house and its surroundings should not be conserved for this reason. Except for this user, all others believe that their houses and their surroundings should be conserved.

As for who should be responsible for the conservation process, the majority (10 out of 17) considers both the government and the users as the responsible agents. However, the number of those who accept only users as the responsible agents (7 out of 17) is quite high as well. It is clear that all of the users believe that users should be a part of the conservation process. Relatedly, the majority of the users (14 out of 17) stated that they would participate in any work to be carried out on the conservation of the traditional dwellings they live in. The 4 users who gave negative answers to this question as they believe that nothing would change.

All the users stated that they would prefer to maintain and improve the conditions of the traditional dwellings they currently live in, rather than buying a new house or moving to a new house, if they have enough financial resources.

Finally, during the interviews with the 13 younger generation users, it was learned that this group also has a high sense of belonging to the area and that they intend to return to these traditional dwellings that they once lived, but the biggest obstacle in this regard is the conservation restrictions.

Overall, it is clear that the users want both to live, and their children to continue living in these traditional dwellings. They want to restore this neighborhood, which they are trying to keep alive with their memories, back to its old life. Although the older and the younger generations are consentient on the issue, the strict conservation rules and regulations that prevent them from making interventions to their houses according to their needs and expectations pose the biggest obstacle in this regard. For these traditional dwellings to continue to be used by their users in their original functions, users should be a part of the process, and their needs, expectations and opinions should be integrated in the decision-making process of the conservation of the traditional dwellings they live in.

In the light of this goal, first of all the most problematic features were examined, in building and neighborhood scales, regarding the answers given during the social research. In result, the ‘conservation restrictions’, ‘cleaning’, ‘heating’, and ‘inconvenience in use’ are the main problems of the houses. In other respects, ‘absence of people’ and ‘abandoned houses’ are the main problems of the neighborhood.

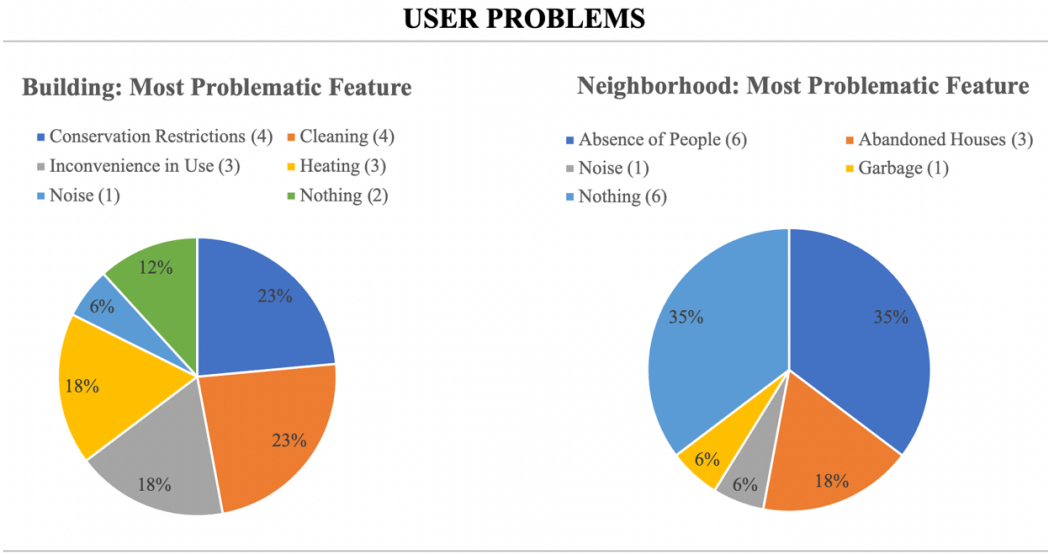


Figure 131 User Problems

The data on the most problematic features of the buildings was supported and crosschecked with the interventions that are made and desired by the users since the interventions are the results and solutions of the problems.

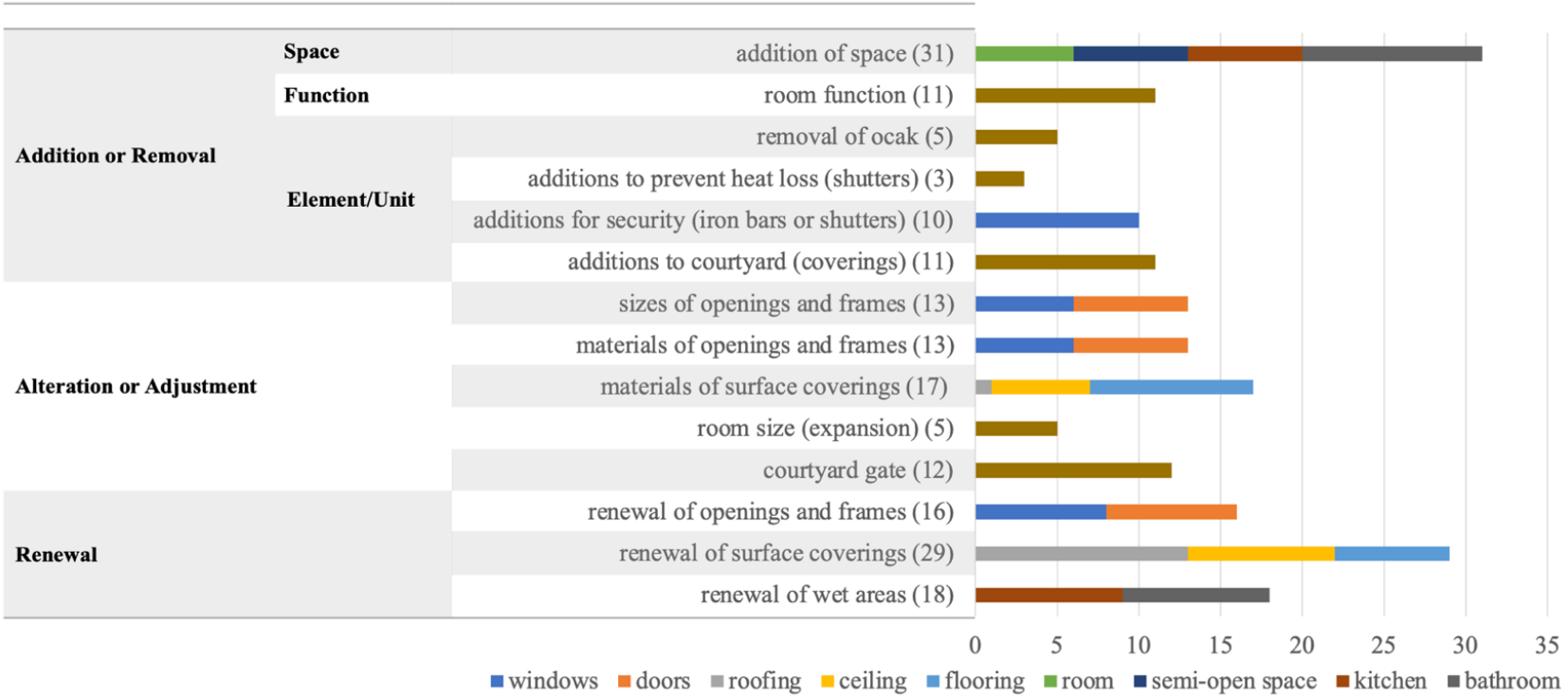


Figure 132 Made Interventions - Distribution 2

Regarding the made interventions, addition of space, renewal and materials of surface coverings, renewal of wet areas came to the fore. When the interventions are examined regarding the functions of spaces, it is possible to see that the wet areas are the most intervened and added spaces in the studied houses. These interventions are followed by the interventions made to the surface coverings and openings and frames. Moreover, when these interventions are evaluated regarding their underlying reasons, the main motivations are human needs such as provision of security, thermal comfort, ease in use and ease in cleaning.

As a part of the user needs and expectations, desired interventions should be examined as well. According to the results, the most desired interventions are changing the materials of openings and frames, changing the materials of surface coverings, and renewing the surface coverings. When the reasons for these desired interventions are investigated, it is found out that the underlying motivations were provision of security, thermal comfort, ease in use and ease in cleaning as well.

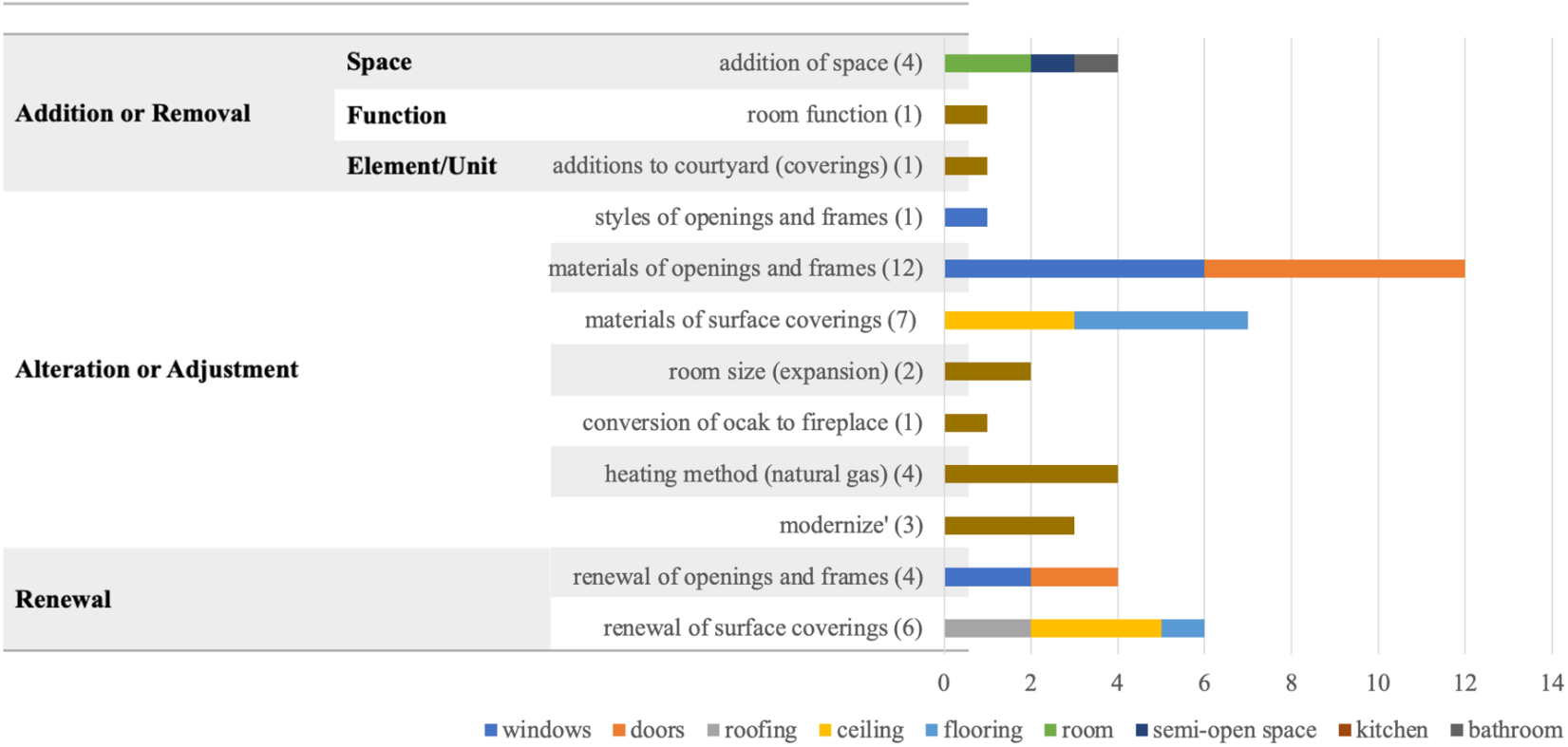


Figure 133 Desired Interventions - Distribution 2

Accordingly, first of all, the interventions made to the studied houses were categorized. Thus, these categories provide a systematic approach and ease in formation of intervention proposals that will consider the compliance of the interventions with the structural features and authenticity of the buildings. Accordingly, there are 3 categories as addition or removal, alteration or adjustment, and renewal.

Addition or Removal	**Space**	Addition of space
	Function	Room function
	Element/Unit	Removal of *ocak*
		Additions to prevent heat loss (shutters)
		Additions for security (iron bars or shutters)
		Additions to courtyard (coverings)
Alteration or Adjustment		Sizes of openings and frames
		Materials of openings and frames
		Materials of surface coverings
		Room size (expansion)
		Courtyard gate
Renewal		Renewal of openings and frames
		Renewal of surface coverings
		Renewal of wet areas

Table 25 Categorization of Interventions - Typology

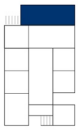
In order to understand the current situation, each category of intervention is examined regarding the examples from cases. Examination was based on the data from the studied houses and interviewed users (building-lot type, plan type, façade type, location of the structure) and expert/researcher observations and analysis (construction material and technique, reflection on the façade, location of the entrance, use of the space above or below).

Addition of Space

- **Room**

Users of buildings 2, 4, 10, 12, 14, 15 added rooms to their houses. While these additions are generally used as bedrooms, examples used as living rooms are also seen. Reinforced concrete is used in these interventions, which were made due to changing living conditions and spatial needs over time. Overall, addition of room is seen in examples where a room on the ground floor was refunctioned as kitchen.

Table 26 Addition or Removal - Addition of Space: Room

	2	4	10	12	14	15
Building - Lot Type	B2	D2	A	A	B2	D2
Plan Type	C1	D2	C6	A1	A1	C1
Facade Type	A1	B1	A1	A2	B	B
Location of the Structure						
Construction Material and Technique of the Structure	Reinforced concrete	Reinforced concrete	Reinforced concrete	Reinforced concrete	Reinforced concrete	Reinforced concrete
Reflection on Facade	Courtyard façade (partially covered)	-	Street façade (partially covered)	Courtyard façade (partially covered)	Courtyard façade (changed) and side façade (covered)	Courtyard facade (partially covered)
Location of Entrance	Courtyard	Courtyard	Main building and Street	Main building	Main building	Main building
Use of the Space Above or Below	-	Terrace	-	Terrace	-	Kitchen (partially)

- **Semi-open Space**

Users of buildings 5, 6, 7, 10, 12, 14, 16 added semi-open spaces to their houses. while the walls of these structures were constructed with reinforced concrete, the materials used to cover them differ. Although it is usually covered with a reinforced concrete structure, there are also examples of coverings made of metal materials. In addition to these, there are also examples created by making use of the areas (on the ground floor level) created by the additions to the upper floors. Since the additions made in these interventions are constructed with reinforced concrete, the continuation of the use of reinforced concrete is seen in the formation of semi-open spaces. Overall, these spaces are added in order to provide and ease the use of and circulation in the courtyard in rainy or sunny weather conditions.

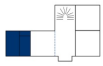
Table 27 Addition or Removal - Addition of Structure: Semi-open Space

	5	6	7	10	12	14	16
Building - Lot Type		D2	C2	A	A	B2	B2
Plan Type	C2	B2	A1	C6	A1	A1	-
Facade Type	A1	-	B1	A1	A2	B	-
Location of the Structure							
Construction Material and Technique of the Structure	Reinforced Concrete	Reinforced Concrete	Reinforced Concrete	Reinforced Concrete	Reinforced Concrete	Reinforced Concrete	Reinforced Concrete
Reflection on Facade	1. Courtyard façade (partially covered) 2. -	Courtyard façade (partially covered)	-	Courtyard façade (partially covered)	-	Side façade (partially covered)	Side façad (partially covered)
Location of Entrance	1. Main Building 2. Courtyard	Courtyard	Courtyard	Courtyard	Courtyard	Courtyard	Courtyarc
Use of the Space Above or Below	1. Terrace 2. -	Terrace	-	Terrace	-	Terrace	-

- **Kitchen**

Kitchens, which are not located in the main building or defined as a place in their original spatial organization, are present in all the studied houses due to changing living standards and needs. Exceptionally, two of the houses (5 and 10) have kitchen in their original spatial configuration since they constitute examples from later periods. However, the users of buildings 3, 7, 11, 12, 13, 14, 15 added kitchens to their houses.

Table 28 Addition or Removal - Addition of Structure: Kitchen

	3	7	11	12	13	14	15
Building - Lot Type	D2	C2	D2	A	C1	B2	D2
Plan Type		A1	C3	A1	C1	A1	C1
Facade Type	A2	B1	A1	A2	B1	B	B
Location of the Structure							
Construction Material and Technique of the Structure	Reinforced concrete	Reinforced concrete	Reinforced concrete	Reinforced concrete	Reinforced concrete	Reinforced concrete	Reinforce concrete
Reflection on Facade	Courtyard facade (partially covered), not seen from the street facade	Courtyard facade (partially covered)	Street and courtyard facades (not covered, but changed due to extension), Side facade (covered)		Courtyard facade (partially covered)	Street and courtyard facades (not covered, but changed due to extension), Side facade (covered)	Courtyard facade (partially covered)
Location of Entrance	Main building	Courtyard	Main building		Main building	Main building	Courtyard
Use of the Space Above or Below	-	-	Kitchen and Bathroom		Terrace	Kitchen and Bathroom	Terrace

- **Bathroom**

Although examples with *gusülhane* or toilet structures (outside the main buildings) were rarely encountered, bathrooms that are not located in the main building or defined as a place in their original spatial organization are present in all the studied houses due to changing living standards and needs. Exceptionally, two of the houses (5 and 10) have bathrooms in their original spatial configuration since they constitute examples from later periods. However, the users of buildings 1, 3, 6, 11, 12, 13, 14, 15, 16, 17 added bathrooms to their houses.

Table 29 Addition or Removal - Addition of Structure: Bathroom

	1	3	6	11	12	13	14	15	16	17
Building - Lot Type	B2	D2	D2	D2	A	C1	B2	D2	B2	C1
Plan Type	C4		B2	C3	A1	C1	A1	C1	-	-
Facade Type	A1	A2		A1	A2	B1				
Location of the Structure										
Construction Material and Technique of the Structure	Reinforced Concrete	Reinforced Concrete	Reinforced Concrete	Reinforced Concrete			Reinforced Concrete	Reinforced Concrete	Reinforced Concrete	Reinforc Concre
Reflection on Facade	Courtyard façade (partially covered)	Courtyard façade (partially covered)	-	Street and courtyard facades (not covered, but changed due to extension), side facade (covered)			Street and courtyard facades (not covered, but changed due to extension), side facade (covered)	Courtyard facade (not covered, but changed due to extension), side facade (covered)	Courtyard facade (not covered, but changed due to extension)	Facade were already change
Location of Entrance	Main building	Main building	Courtyard	Main building			Main building	Main building and courtyard	Main building	Courtya
Use of the Space Above or Below	Bathroom and Terrace	-	-	Bathroom and Kitchen			Bathroom and Kitchen	-	-	-

Room/Space Function

Users of buildings 1, 2, 4, 6, 7, 8, 9, 11, 13, 16, 17 have refunctioned a space in their houses. While the users of 4, 7 and 9 have changed the functions of the spaces in their service structures, the rest of the users have refunctioned the spaces in the main buildings. Originally, the ground floor spaces were used as *yağlık*, storage or barns in early examples, while living spaces are seen on the ground floors in examples from later periods. Today, it is seen that the ground floor of all studied buildings has been reorganized as living spaces and these functional changes were made accordingly. It should be noted that, neither barn nor *yağlık* were seen in the studied houses due to changing living conditions.

- **Kitchen**

Kitchens, which are not located in the main building or defined as a place in their original spatial organization, are present in all the studied houses due to changing living standards and needs. Exceptionally, two of the houses (5 and 10) have kitchen in their original spatial configuration since they constitute examples from later periods. However, the users of buildings 1, 2, 4, 6, 8, 11, 13, 16, 17 refunctioned one of the rooms in their houses as kitchen.

Users of buildings 4 and 9 have refunctioned the space in their service structure as kitchen. While the service structure of the building 4 is adjacent to the main building from an entrance inside the house, the service structure of building 9 is located across the main building and has its entrance from the courtyard.

Apart from these, the users of buildings 8 and 9 have obtained a kitchen by refunctioning one of the spaces for storing their cooking supplies and goods but continue to use the sinks that were installed outside their buildings due to conservation restrictions. The user of building 8 wants to relocate the sink inside their house (in the space used as kitchen) and to create a ‘fully-supplied’ kitchen for themselves in order to provide ease of use.

- **Bathroom**

Although examples with *gusülhane* or toilet structures (outside the main buildings) were rarely encountered, bathrooms (which are not located in the main building or defined as a place in their original spatial organization) are present in all the studied houses due to changing living standards and needs. Exceptionally, two of the houses (5 and 10) have kitchen in their original spatial configuration since they constitute examples from later periods.

Users of buildings 4 and 9 have refunctioned the space in their service structure as bathroom. While the service structure of the building 4 is adjacent to the main building from an entrance inside the house, the service structure of building 9 is located across the main building and has its entrance from the courtyard.

Removal of *Ocak*s

*Ocak*s in all of the studied houses are currently not in use. While some are covered, some are left as they are. *Ocak*s that are not used and left as they are are either used as storage spaces or are covered with fabrics for cleaning reasons. User of building 2 who does not want to cover the *ocak*, even though it is not in use, wants to convert it to a fireplace and use it for heating purposes.

Only 1 of the houses (15) has its original chimney. Others indicated that the chimneys of their houses were deteriorated and collapsed or taken down since the *ocak*s in their houses were not used. One of the users of the houses (6) that took down their chimney indicated that when their chimney had collapsed, they wanted to build another by staying true to the original one. After they renewed their chimney, they were warned by the authorities that the positioning of the chimney was wrong and that they should change it. The position of the chimney was rearranged upon the warning, but after a while it was damaged again due to weather conditions and was removed by the users since the street on which the building is located has dense pedestrian traffic and the chimney was causing a danger for those passing by. Users of this building complain about the enforcing attitude of the authorities without being helpful.

Additions for Heating and Cooling Methods

Applications for thermal insulation was not encountered in any of the studied building. In this context, heating and cooling methods and related interventions against heat loss come to the fore. The use of air conditioner is common in heating and cooling methods, and it is used in 9 of the houses. It has been determined that there are applications that may damage the structure or distort the original appearance in the installation of air conditioners and their extensions. In addition, there are houses whose users want to use natural gas for heating if the necessary infrastructure system is established.

Additions to Prevent Heat Loss

When the interventions to prevent heat loss are examined, it is seen that the users of buildings 1, 2 and 13 have added doors, shutters, or curtains to the ground floor levels of the staircases in their houses. the users of the buildings who made these interventions, do not use the upper floors of the houses they live in during the winter due to difficulty in use and heating, and to prevent heat loss between floors. They stated that these additions made great difference.

Additions for Security

Users of buildings 5, 9, 10, 11, 12, 13, 14, 15, 16, 17 have added iron bars or shutters on the windows or doors of their houses. This intervention that was made for security reasons, can be seen on the ground floors.

Additions to Courtyard

Users of buildings 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14 have added coverings on their courtyards. This intervention is primarily to provide circulation between service structures outside the main building in rainy weather conditions and to provide comfort in the use of courtyard in very sunny or rainy weather conditions. When the materials of the coverings added with these goals are examined, it is seen that there is a tendency towards metal or plastic materials or pergolas.

Then, the most valuable features were examined, in building and neighborhood scales, regarding the answers given during the social research. In result, 'courtyards', 'peacefulness', 'belonging to me', 'memories', 'location (central)', 'detached', and 'architectural features' are the most valuable features of the houses, and the 'location (central)', 'neighbors', and 'memories' are the most valuable features of the neighborhood.

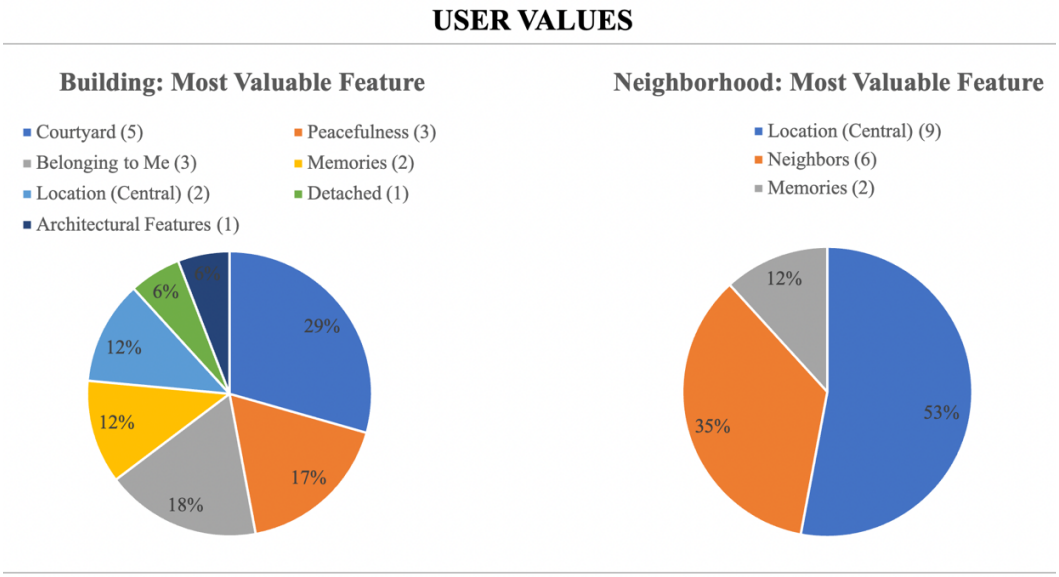


Figure 134 User Values

Data on the most valuable features of the buildings was supported and crosschecked with the sustained features, which are kept as they are and still in use. Regarding the observations on site, the *dolap*s, *ocak*s, and courtyards are the tangible features of the studied houses which are sustained. In other respects, regarding the statements from the interviews, the sustained intangible features are the sense of belonging of the users to the area and the memory value of the area.

Table 30 Sustained Features

	Tangible	Intangible
Sustained	*Dolap*s (in use)	Sense of belonging
	*Ocak*s (not in use but left as they are)	Memory value
	Courtyards (in use)	Willingness to live here
		Neighborly relations

Finally, answers given during the interviews for the 'sense of belonging and willingness to conserve' section was analyzed and evaluated in order to find the most suitable participation and conservation method for the case. With the help of these studies, a proposal for integrating users to the conservation process of their traditional dwellings can be presented.

4.2 Proposals for Integrating User Needs and Expectations into the Conservation Process of Traditional Dwellings in Milas

Traditional dwellings in the traditional residential urban fabric of Milas should be conserved with the participation of their users since they want to continue living in these houses in a fabric that is prone to the increasing risk of abandonment. With the help of participatory methods in the conservation process of the traditional dwellings, the users can be included in the process to ensure the continuity in use of the traditional dwellings in their original functions and in their use with the inhabitants. Since most of the users are willing to cooperate with the experts, take part in the process and seek a common way out by expressing their problems and demands, an environment for functional participation should be provided. In this form of participation, consultation and negotiation are the methods to be adopted. Accordingly, community members are being consulted and involved in the conservation process of the local heritage with the help of enquiries, surveys and

meetings that enable them to deliver and discuss the problems and policies in a medium that supports creativity and self-expression (Spiridon & Sandu, 2015).

Regarding the results of the studies mentioned in the previous section, first, meetings should be held with the users and the prejudice towards the conservation rules and regulations should be broken down in order to create a neutral solution-oriented environment that will enable cooperation among parties. As experienced in the case of Milas, it is difficult to even chat with the traditional dwelling users about their houses since they are hesitant or reactive about this issue. Once they see and trust the collaborative attitude of the other person, they tend to share and learn as well, and therefore it is very important not to break their trust.

After establishing this environment, both physical and social research should be carried out on the related structures and users. Within the scope of the thesis, users of the traditional dwellings in the study area were met and research were carried out in the studied traditional dwellings. As a result of the analysis and evaluations regarding these meetings and research that are presented in the previous sections, it is decided that a guide should be prepared for both the users and experts in order to provide a basis for the future interventions. In the light of the conducted studies within the scope of this thesis, this guide should cover recommendations for the interventions that constitute the primary needs of the users with the changing life standards such as addition of wet areas, renewal and materials of openings and frames and surface coverings, additions of iron bars and shutters, suitable heating and cooling methods and the application of the related devices, additions for preventing heat loss, courtyard coverings, addition of semi-open spaces, terraces, use of *ocak*s and repair work of chimneys, respectively. The guide should be comprised of the related instructions on the authorization process that need to be followed by the users, and the appropriate materials, construction techniques, forms, locations, and features of the interventions to be made to the traditional dwellings regarding the needs and expectations of users.

Issues and problems for which relevant proposals should be developed can be examined in order of importance and prevalence are as follows:

Wet Areas: Kitchens & Bathrooms

Based on the 'addition of space' and 'room function' change data, the first place in the needs of users due to changing living conditions is the need for easily accessible wet areas equipped with today's standards. Overall, all the users have tried or are still trying to own these spaces in some way. Accordingly, there are different solutions regarding the location of the additions or function changes of spaces in the studied houses, the relations of these spaces with the main building and the reasons for these interventions. Although the primary goals were to obtain these spaces with entrances from the main building, wet areas accessed from the courtyard can be seen in the examples where the features of the structures are not suitable or the changes are made in order not to damage the structures. In the cases where the wet areas are solved with spaces that cannot be directly accessed from the main building, courtyard coverings or other structures (mostly semi-open spaces) are added in order to facilitate inter-space circulation in rainy weather. In the recommendations to be made, attention should be paid to the ease of accessibility from the main building.

In addition to this, it is determined that the kitchens in the studied houses have sinks, refrigerators and dishwashers, and the bathrooms have toilets, baths, sinks and washing machines. Users who have already solved their need of wet areas in compliance with the conservation rules and regulations and who need to solve their need of wet areas both want to have spaces where all the mentioned equipment can be found together. In that sense, the recommendations to be developed should be suitable for the creation of spaces with the necessary features and equipment. The users should be guided by introduction of ways which they can solve their needs for having wet areas in their houses.

Openings and Frames & Surface Coverings

Timber elements of the buildings were renewed in order to increase security, provide ease in cleaning and prevent heat loss. When these justifications are examined, it is seen that these changes are due to basic needs. However, in the interviews held with the users of the studied houses, the problems encountered in the process of obtaining permission from the authorities regarding the realization of the interventions aimed at renovating the worn-out elements were brought to the agenda. Additionally, the users complained about the cost of replacing timber elements. Considering the reasons and cost of the renewal process, some users have made material changes. Although most of the users who made material changes think that they have achieved their goals in terms of use, they are aware that these interventions damage the authenticity of the structures, and they state that they would have preferred to renew it if they had the opportunity or adequate financial resources. Users who are in this situation due to their fundamental rights and needs need assistance and encouragement in the process of obtaining permission and post-authorization during the renewal process. It is necessary to turn the existing awareness and willingness into an opportunity for renewal by acting solution-oriented without dissuading.

In other respects, some users stated that they would like to change the materials of all timber elements and surfaces on the grounds that it would be more modern and durable, if they had the opportunity. Even if they constitute the minority and are stated by the younger generation users, their needs and expectations regarding the changing life conditions should be taken into account. In order to ensure continuity in use of these traditional dwellings, needs and expectations of the younger generation users should be met as well. For this, user needs and expectations should be evaluated in cooperation with experts and users and a consensus should be reached on this issue, and a participatory approach should be adopted in the realization of these desires, based on the characteristics of the area and the statements of the users.

In other respects, iron bar or shutter additions to the doors and windows on the ground floor level and the change of the materials of the courtyard gates (with iron) are of the frequently encountered interventions for security purposes. Users' thoughts on security reinforce their sense of belonging to the area they live in. Therefore, recommendations that are compatible with the structures and meet the needs of users should be presented for increasing security.

Heating and Cooling Methods & Related Problems and Solutions

Applications for thermal insulation was not encountered in any of the studied buildings. In this context, heating and cooling methods and related interventions against heat loss come to the fore. As a method of heating, the stove is the most traditional and preferred. However, alternative heating methods are preferred today since most of the users are elderly and have difficulty in setting up and using the stoves. It is stated that with these alternative methods, the houses cannot be sufficiently heated and moreover the heating costs increase. As a solution to this, there are examples of cases where the upper floor is not used, or door or shutter-like additions are made between the floors in order to prevent heat loss.

To elaborate the alternative heating and cooling methods, the use of air conditioner is very common in the study area. It has been determined that there are applications that may damage the structure or distort the original appearance in the installation of air conditioners and their extensions. Also, there are houses whose users want to start using natural gas for heating if the necessary infrastructure system is established. Although, there is no natural gas use in any of the studied houses and the necessary components have not been installed to the buildings, their expectations for the thermal comfort conditions of their houses should be considered. Briefly, there is a need for guidance in terms of suitable heating methods and the application of the related accessories on the structures.

In other respects, when the interventions to prevent heat loss are examined, it is seen that 3 of the users have added doors, shutters or curtains to the ground floor levels of the staircases in their houses. The users of the buildings who made these interventions, do not use the upper floors of the houses they live in during the winter due to difficulty in use and heating and to prevent heat loss between floors. They stated that these additions made great difference. Considering the efficiency of these interventions, a suitable and compatible recommendation should be presented for the door or shutter-like attachments that prevent heat loss.

Additionally, dampness problems caused by roadworks or interventions to the buildings damage the structures. Since the studied houses have mostly been relatively less intervened, this problem was not witnessed frequently. Although the traditional dwellings with dampness problems constitute the minority among the studied houses, a comprehensive study should be carried out to determine the sources of the problems. In order to prevent further damage to the structures, a solution should be developed for this matter.

Courtyard Coverings, Semi-Open Spaces & Terraces

It is seen that the top covers were added on the courtyards in order to increase the usage period of the courtyards throughout the year and to facilitate the access to the units located separately from the main building when the weather conditions are not favorable. When the materials and application methods of these additions are examined, it is revealed that there is a need for suggestions that are suitable for the features of the structures, will not damage the authenticity, and will meet the needs of the users.

In fact, this is also valid for the semi-open spaces added to the courtyards. Semi-open space additions in all of the studied houses were constructed with reinforced concrete. Although the users indicate that using reinforced concrete is more practical and economical, it is observed that the structures they have added are not compatible

with the features of the traditional dwellings. For this, suggestions should be made for semi-open spaces.

In connection with this, the upper floor of the majority of the service structures added on the courtyards is used as terraces which are generally visible from the street. suggestions can be developed for terraces to be physically compatible with the traditional dwellings.

***Ocak*s and Chimneys**

Today, none of the *ocak*s in the studied houses are used in their original functions. While some are covered, some are left as they are. *Ocak*s that are not used in their original functions and left as they are are either used as storage areas or covered for cleaning reasons. One of the users who neither uses nor plans on covering the *ocak*, wants to convert it into a fireplace and use it for heating purposes. In fact, this intention should be taken into consideration and a recommendation for this conversion should be developed.

Unfortunately, only 1 of the 17 studied houses still has its original chimney. Other users indicated that the chimneys of their houses were deteriorated and collapsed or taken down since the *ocak*s in their houses are not used. One of the users of the houses that took down their chimney indicated that when their chimney had collapsed, they wanted to build another by staying true to the original one. After they renewed their chimney, they were warned by the authorities that the positioning of the chimney was wrong and that they should change it. The position of the chimney was rearranged upon the warning, but after a while it was damaged again due to weather conditions and was removed since the damaged chimney caused danger around the house which is adjacent to a street with dense traffic. During the interviews, users of this traditional dwelling complained about the enforcing attitude of the authorities rather than being helpful.

Today, it is very difficult to see the examples of chimneys unique to the region, which are one of the most significant elements of the traditional dwellings in Milas. However, with the help of refunctioning the *ocak*s and ensuring their use, it is possible for these architectural elements to become visible again today. Guidance on the repair of damaged or destroyed chimneys regarding their materials, forms, locations, and positions is required.

Table 31 Proposal - Content of the Guide

GUIDE	
wet areas: kitchens & bathrooms	**wet areas:** recommendations for spaces that are easily accessible from the main building + suitable for placement of equipment for today's needs
openings and frames & surface coverings	**renewal:** ease in obtaining permission + encouragement and support in application **material change:** consultation by listening to user needs + negotiation **iron bars or shutters, courtyard gates:** suitable recommendations
heating and cooling methods & related problems and solutions	**heating and cooling methods:** recommendations for suitable methods + application of the related equipment on the structures **additions to prevent heat loss:** effective and suitable recommendations **problems related with air quality:** further research on the underlying reasons + recommendations to prevent the problems
courtyard coverings, semi-open spaces & terraces	**courtyard coverings, semi-open spaces, terraces:** recommendations that are compatible with the structures
***ocak*s & chimneys**	***ocak*s:** recommendations for converting ocak into fireplace **chimneys:** guidance on the repair of chimneys

After this stage, a meeting with the related groups should be held in order to present the recommended solutions for the user needs, expectations and problems. During these meetings, a medium where users can share their opinions should be provided. Negotiations should be done, if necessary, through dialogue and discussions on solutions and recommendations. Should the need arise, this guide should be revised and presented to users again. Last, it should be implemented and the adequacy of the content of the guide and the conditions related to the implementation process should be monitored.

All in all, with the help of the meetings and preparation of a guide, the interventions to be made on the traditional dwellings will be holistic, consistent, and suitable for the features of the structures. While presenting a basis for the future, it will become an opportunity to cooperate with the users in terms of taking the possible damage to the traditional dwellings under control before it is too late. Moreover, the users of traditional dwellings will have stronger sense of belonging and increased satisfaction with the environment they live in while being a part of the conservation process of their houses.

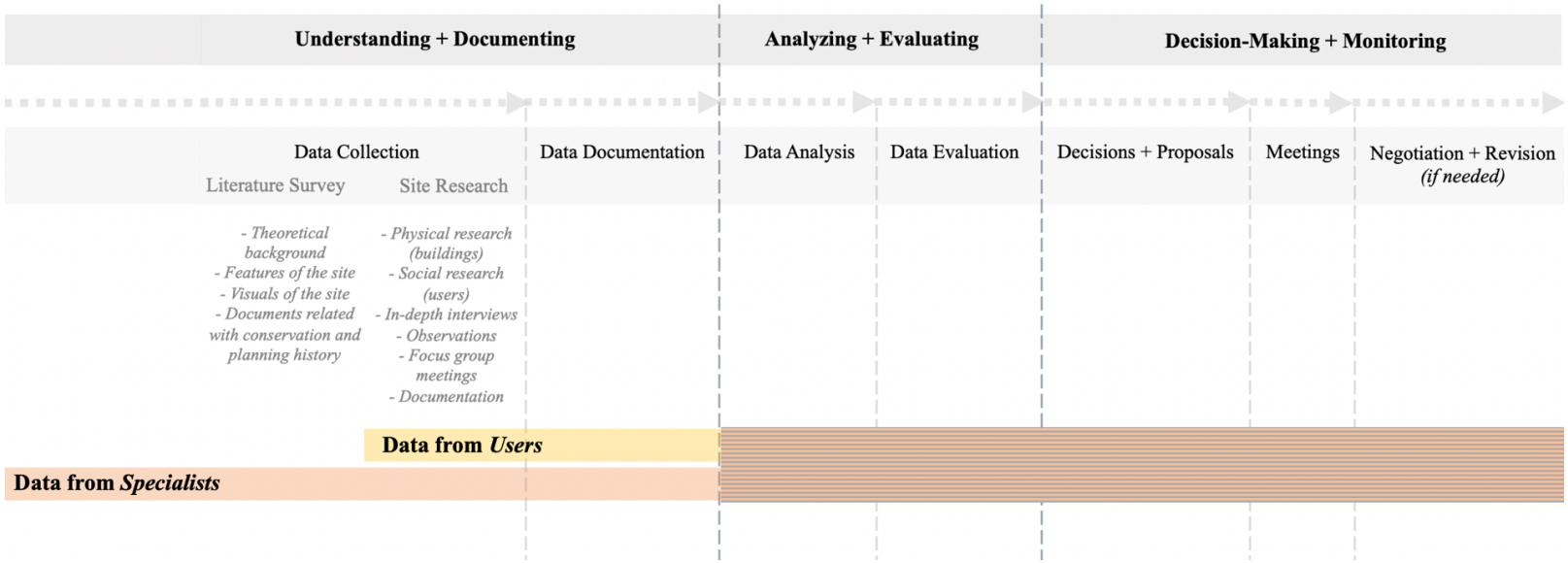


Figure 135 Proposal- User-Integrated Conservation Process

CHAPTER 5

CONCLUDING REMARKS

Human behavior has a decisive role in the built environment. However, the built environment influences but does not determine the behavior of the people who use it. The emotions, intentions, positions, and expectations as well as the social context are also effective factors in human behavior (Vischer, 2008). Individuals perceive the environment according to their preferences, tastes, ideals, and expectations, and regarding their character, identity, and social status. As a result of their perception, they acquire feelings of satisfaction or dissatisfaction that shape their behaviors. People's desire to control the space according to their needs is a prerequisite for satisfaction and the driving force of their behavior (Günal & Esin, 2007). Accordingly, users will behave regarding their will to control the space, to make it specific to their needs, and to realize their tastes and expectations, or in other words regarding their state of satisfaction with the environment.

The tension caused by the difference between the opinions of the users and the existing conditions of the residential buildings constitute the terminal point of the residential satisfaction, and result in abandonment (Günal & Esin, 2007). Therefore, it is necessary to know the qualities suitable for people and to ensure the necessary environmental and social conditions for them. Even though this understanding is meaningful in theory, it encounters some obstacles in practice. Unfortunately, most users are obliged to settle for what they find as 'givens', regardless of the prevalent standards or norms (Leaman, 2003). In these cases, the users use the space without

being aware of it, until they move to a space arranged with their own choices. Meanwhile, the users' understanding of space adds itself to other tastes and is incapable of positioning and being in its own way unless it attaches itself to another discourse. As the users do not reflect on themselves, they are compelled to imitate the gestures of another reality. Therefore, everything other than the user's needs is rendered worthless and meaningless by their needs (Arayıcı, 2018).

This situation becomes more striking and restrictive especially for the users of traditional buildings with conservation status where sharp rules and regulations are in question. Specifying the position of the user needs and expectations in the design process is important for determining the adequacy of the building in the design and use phase. Accurately established relationship between the design and user needs serves the purpose of use, and the accuracy of this relationship in old buildings is higher than in today's buildings (Şener, 1977). In fact, this coherence is a result of the environmental conditions, and the user needs of the period in which they were made (Aluçlu et al., 2006).

Nevertheless, legal, and administrative framework prioritizes physical integrity, ignores differences and changes, and restricts the user to shape the living space according to their needs and preferences by dictating a pre-constructed environment-user relationship. However, there is no fixed user and unchanging requirements for structures. Considering that both its users and the living standards change over time, it is necessary to identify the changing user and to carry out a separate determination study regarding each problem. Through these studies, the meaninglessness of the space and its components (caused by the necessity of settling for the givens) can be minimized, and integrated conservation of the traditional structures can be achieved.

In such cases where the relationship between people and heritage is weakened or broken, adoption of a people-centered approach helps identification and resolution of the problems. People-centered approaches have a goal beyond increasing the levels of participation. They ensure that the people who are connected with the heritage, which is the building block of heritage management, are and remain at the

center of conservation of that heritage (Manandhar & Tiwari, 2020). Studying and identifying the user experience enables understanding the interaction, communication, and the definition of the relationship between the building and its user through providing information about the product (space and its features) and the process (user behavior and reactions) (Vischer, 2008). For this reason, users and their needs and expectations should be integrated into the conservation process of traditional dwellings.

Conservation projects generally consist of three phases: understanding, evaluating and decision-making. Different stakeholders take part in these phases according to different levels of participation. Building users are also among the stakeholders, however their participation in the mentioned phases varies from project to project. To elaborate possible situations or scenarios in different projects, the user either may not take an active role at any stage or may only play an active role in the understanding phase or may participate in the understanding and evaluating phases and be left out in the decision-making phase. The most ideal one among these scenarios is the one in which the users take an active role in all three phases, yet this cannot be implemented due to certain constraints. At this point, the issue that needs to be emphasized and studied is the ways in which the users can take an active role in all these phases.

In this context, one of the biggest problems identified in Türkiye is the restrictive and almost one-sided approach to the conservation process of traditional dwellings. In other words, the predominance of the 'common property' feature of the traditional dwellings as cultural heritage and the fact that the process is primarily based on preserving the structures physically, leaving the users in the background, create the major obstacle. However, on the other hand, a comprehensive and administerial study cannot be carried out in Türkiye in terms of conserving the traditional dwellings due to different priorities, high costs and constraints.

In addition to this situation, the fact that the users remain in the background in the conservation process causes the preservation of only the structures that are used or

will be used by their users. Nevertheless, the number of abandoned traditional dwellings is quite high and this number continues to increase day by day. In order to conserve traditional dwellings, which are currently increasing in number, these structures should continue to be used. It should be noted that when users participate in the process, continuity in use can be ensured and success can be achieved by increasing the number of used and conserved structures.

The approach that unilaterally treats traditional dwellings only as common property (as cultural heritage) causes the anthropic factor in these houses to be ignored. Instead of this one-sided approach, it should be considered that these structures are also private properties belonging to their users.

Another challenge in this context is time. Considering the relationship of time with change, approaches that restrict users should be renounced. Development should be supported for continuity and sustainability. Traditional dwellings have existed with the lives inside them. It is necessary not to break the relationship of this building stock with life, which constitutes its essence. For this, interventions made or desired to be made to the structures by the users according to their needs and expectations should be approached in a conciliatory environment.

Although the biggest cliché about traditional dwelling, 'not being able to drive a nail *(bir çivi bile çakamamak)*', maintains its meaning in theory, it loses its meaning in practice. In other words, despite the rapidly changing and developing conservation approaches on an international scale, the prohibitive attitude in Türkiye remains. However, users who want to continue living in the houses in which they currently use and meet their changing needs, somehow find their way and make interventions to the structures despite the constraints. Unfortunately, these interventions carried out with human needs and intrinsic motivators damage the structures. To prevent this situation, it is necessary to acknowledge traditional dwellings, which are 'untouchable' due to their societal status, as private properties belonging to their users.

While the change is inevitable, the interventions made by the users should be considered natural up to a certain point, depending on the reasons for their implementation. These humane interventions that users carry out in order to meet their changing needs and expectations with the urge to keep up with the changing living conditions should be tried to be understood and solution proposals should be developed in cooperation so that life can continue in these structures. In other words, the conservation process must be democratized.

To overcome these challenges, there is an urgent need of action for the following issues:

1. Apart from physical research on the buildings, social research about the users should also become mandatory in the traditional dwellings studied. A guide should be prepared to inform all experts about the extent and content of the research. In this guide, there should be a template or checklist that need to be followed for examination of the structures and interviews with the users.

   Briefly, subjects that should be addressed in the social research are the demographic data (sex, age, occupation, hometown), building use and ownership (building age, ownership status, duration of inhabitance, frequency of use, number of users), spatial and thermal comfort conditions in building scale (heating method, cooling method, less comfortable season, ventilation, lighting, number of rooms/spaces, problems related with interior air quality, made interventions, desired interventions, most valuable feature, most problematic feature), spatial comfort conditions in neighborhood scale (security, neighborly relations, public services and social reinforcements, maintenance, tourism, most valuable feature, most problematic feature), and sense of belonging and willingness to conserve (sense of belonging, contentedness with living here, opinion on the value of the house, opinion on conservation,

responsibility for conservation, willingness to participate, willingness to pay). Moreover, within the scope of social research, opinions of younger generation users can be analyzed in terms of their willingness to move back and restrictions affecting their decisions on the matter.

However, it should be noted that the social research should be case-specific. For this reason, abovementioned topics of the social research questions should be supported with additional questions regarding the characteristics of each case.

2. Participatory methods should be adopted immediately as a natural result and method of involving users in the conservation process. Although it is already mentioned in the law, the participation of stakeholders in the process should be mandatory and the process should not be left to the initiative of experts or authorities. Instead of the statements outlined in general terms, directive and obligatory statements to the authorities and experts regarding the participation of stakeholders should be included.

   In this context, to manage the practices more healthily and easily, informative and guiding resources should be prepared on the methods and forms of participation, primarily for the authorities and experts involved in the conservation process. Pilot studies should be carried out and sample cases should be presented for the adoption and implementation of methods, which has not yet become widespread. In this way, a detailed and diversified instruction will be presented to the interested parties on how and in what way users can participate in the process.

   By this means, the most suitable participation method for the study area can be determined in conservation process of each case. In the determination of this method, the willingness of the users to participate

in the conservation process and the case characteristics will have an impact. Therefore, it is necessary to collect these data through social research in order to appoint the participation method to be adopted.

Even when the laws and regulations are revised according to adoption of participatory approaches in conservation process, the process should be monitored in order to ensure that the practices are carried out in reality. For this reason, responsibility and authority must be granted to KUDEB or any local authority/agent to follow, monitor and lead the process and practices.

3. Considering the length and difficulty of the conservation process, steps should be taken to facilitate the operations. Participation of the KUDEB units, which were established for this purpose, in the preparation process of the abovementioned guides by working in partnership with the committees will be beneficial both in accelerating the process and in guiding the users directly and accurately. It is very important for these units, which are affiliated to local authorities, to be aware of the values, problems, and potentials of the region, to guide the authorities and users in this regard, to keep the relationship between the conservation boards and the users alive, and to monitor the process by becoming actively involved in the conservation decision-making stage.

4. Again, considering the length and difficulty of the process, reports, in which the physical, historical, architectural and social features of the studied region are elaborated, should be prepared. These reports should be kept available and open access to the resources should be provided. Moreover, a comprehensive study on documentation of the traditional dwellings in the area of responsibility should be carried out urgently.

5. Legislation on comprehensive and simple repairs should be prepared to ease and accelerate the process. Also, a principle decision should be prepared and published for identification and integration of (current) users, and their needs and expectations into the conservation process of traditional dwellings for they are the private spheres of their users and properties of common interest in tandem.

All in all, when the users are integrated into the conservation process of their dwellings, solutions regarding their needs and expectations can be developed. Thus, they will continue to live in the houses they currently live in.

One of the most significant results of the study, which was carried out in a place like Milas where traditional dwellings are in danger and the number of traditional dwelling users is decreasing day by day, is the willingness of current users and younger generation users to live in these houses where they currently reside or have once resided. In addition to this willingness, the positive and cooperative attitudes of users towards conservation are promising. Despite everything, their efforts to make changes in accordance with their needs in these houses, which they continue to use and conserve, should not be ignored and the voices of users should be heard.

Nevertheless, it should not be forgotten that in addition to being private properties of their users, these structures have certain values brought by their status as cultural heritage. For this, multidisciplinary and inter-stakeholder cooperation are essential in conservation studies. In this context, there are some limitations. Further research is required on the determination of the institutions, organizations or individuals who will take charge of the participation of the users in the conservation process and follow the process, and the scope and functioning of the process.

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APPENDICES

A. Approval Form from the Applied Ethics Research Center

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

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20 Şubat 2020

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Doç.Dr. A.Güliz Bilgin ALTINÖZ, Doç.Dr. İpek Gürsel DİNO, Dr. Sibel YILDIRIM ESEN, Dr. Elif Sırt ÇIPLAK, Negin JAHED, Tuğçe YÜRÜK, Sera Naz ERSOY

"Türkiye'deki Geleneksel Konutlar İçin İklim-Dayanımı, Koruma ve Konfor Amaçlı Sürdürülebilir Onarım Süreçleri" başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve 077-ODTU-2020 protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Prof.Dr. Mine MISIRLISOY
Başkan

Prof. Dr. Tolga CAN
Üye

Doç.Dr. Pınar KAYGAN
Üye

Dr. Öğr. Üyesi Ali Emre TURGUT
Üye

Dr. Öğr. Üyesi Şerife SEVİNÇ
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Dr. Öğr. Üyesi Müge GÜNDÜZ
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Dr. Öğr. Üyesi Süreyya Özcan KABASAKAL
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