Innovative Life in the Urban Forest as an Urban Landscape Area in the Context of the Continuity of Cultural Heritage

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Rapidly decreasing rural population and migration to cities bring along many problems. This situation causes extreme poverty to concentrate in urban areas and create unhealthy environments. Rural landscape as a cultural and natural heritage site; can be seen as living and dynamic systems that include technical, scientific, and practical knowledge about human-nature relations, contribute to the continuation of bio-cultural diversity, and include cultural, spiritual, and natural characteristics of an environment. It is necessary to consider the natural, socio-cultural, and physical environment relations with a content that makes sense with an integrated understanding, considering the traditions, including beliefs, rituals, collective behaviours. Koramaz Valley, which has low-density semi-urban settlement features and is located on the periphery of Kayseri (Turkey) city centre, presents unique examples of the mutual interaction of human and nature, and is also on the Tentative List of UNESCO World Heritage Sites, has been selected to be examined in this sense. The potential arising from the coexistence of the cultural and natural landscape in the settled areas in rural areas, as in the example of the Koramaz Valley, creates an opportunity for the sustainable protection of these areas. In urban settlements with high building density, the hard surfaces that make up the built environment, both cover the natural environment and have negative effects against climate change due to the amount of carbon emissions in their production process. It is important to develop urban settlements in low-density rural areas as well as to systematically increase the ratio of natural surfaces in existing urban settlements within the city. The planned realization of housing settlements in rural settlements with low urbanization and high rural density also provides an important opportunity for new urban settlement forms to be developed against climate change. To realize the urban development that can be controlled with this perspective, which can be described as "Innovative Life in the Urban Forest", cultural landscape areas, where natural and cultural heritage come together, can be put forward as areas of opportunity due to their spatial and socio-cultural potential. To reduce the effects of climate change, addressing low-density rural settlements with a new settlement model with a cultural landscape perspective can be put forward as an alternative settlement form against the dense urban settlement approach consisting of hard surfaces that increase the negative effects of climate change.

Keywords: bio-culture, cultural landscape, cultural heritage management, Koramaz, urban design.

Introduction

The population decline, which has occurred in the last fifty years due to migration from rural to urban areas, brings along problems in the built, natural, and social environments in rural areas. In a situation where the climate change we have come to is much more felt, it is pointed out that the necessity of ensuring the rural-urban balance under the title of 'Sustainable Cities and Communities', one of the development goals defined by the United Nations, while carrying out planning studies in developed and developing countries (United Nations, 2022). As a solution to the problems created by dense urbanization in cities, the potential in rural settlements can be thought of as low-density settlement models that are in contact with the rural area. As it is stated by Yona Friedman (2022), "Urban condensation is a systemic disease, a syndrome of obesity. Dispersion is necessary because if the city loosens up, nature will slip back in. There is no reason for agriculture to be pushed outside of cities. It can become a form of urban occupation, which would enable cities to gain greater autonomy".

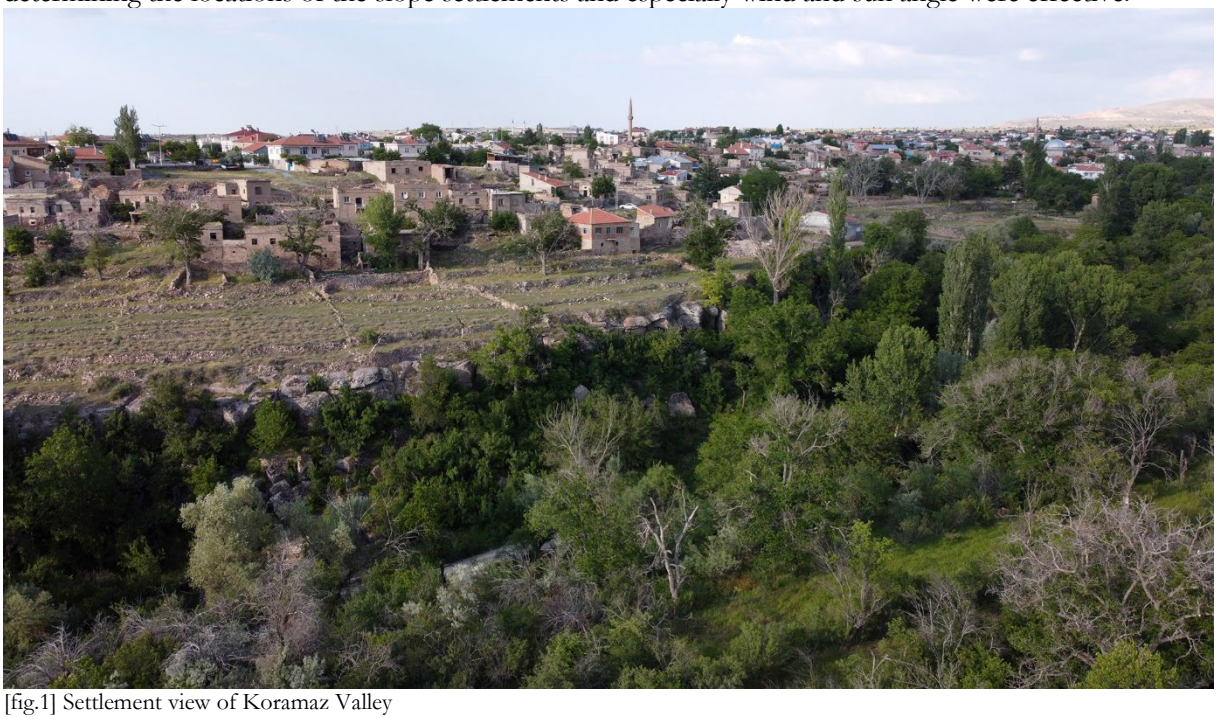
It has an important potential for the contribution of rural areas to the country's economy, balancing the migration tendency, the continuity of agricultural production, and the protection of the environment and natural resources. However, to be able to protect any tangible or intangible phenomenon, it is necessary to mention an accumulation of material or moral "value". Value is the relationship state that emerges from everyone's connection with an object or concept. Rural landscape areas have values that can create a protection strategy thanks to the potential created by their cultural and natural values. (Aksoyak, 2019).

While determining the conservation strategy and principles, it is necessary to follow the contemporary approaches in the world and to determine the rural cultural landscapes of the region in a way that preserves the original characteristics. It is known that the values of cultural landscapes of rural character are a vital component of the heritage of humanity and one of the most common types of ongoing cultural landscapes. It is possible to mention that the cultural landscape as a heritage includes technical, scientific, and practical knowledge about human-nature relations, is the reflection of social structures and functional organizations that have changed and transformed from the past to the present, and is living and dynamic systems that include cultural, spiritual, and natural features that contribute to the continuation of bio-cultural diversity. Rural landscape includes traditions such as beliefs, rituals, collective behaviors, crafts, as well as houses, streets, building materials and details related to settlement morphology. It is possible to deal with the rural landscape with a content that gives meaning to the natural, socio-cultural, and physical environment

relations with an integrated understanding, and in this sense, it is possible to say that cities are an alternative way of life to observe the rural-urban balance at the point where they are today.
In the rural landscape, the natural environment, physical and social structure, and the spatial environment that reflect all the structure, are intertwined. This unity constitutes the heritage itself as a value. The vernacular architectural structure, which reflects the spirit of the place in a rural settlement, can be considered as one of the most important features of the rural landscape, since the natural environment and vegetation are in and together with the settlement, since it contains the space and production systems that ensure the continuity of the economic structure, due to the existence of production and consumption habits that develop according to the ecosystem in which the settlement is located, since daily life is lived in a sustainable structure with local values and facts of the ecosystem and since it is located in a way that preserves the integrity and originality of the tangible and intangible values specific to the place.

Kayseri and Peripheral Location Features

To understand how the natural environment is shaped and used by people, the social, cultural, historical, and economic structure of that region should be considered. Socio-cultural and economic data are the values that make a settlement unique to that place, which has affected the physical condition of the settlements as a reflection of knowledge, experience, and cultures in relation to the nature and society. Daily life practices, belief systems, traditions, livelihoods, human needs are the most important elements in the formation of a built environment. With these data, we are able to analyse the complex relationship between physical space and social fabric, with which spaces the built environments produced throughout history were produced, how economic conditions and production systems were shaped.
When we look at the rural settlements in Kayseri and its surroundings, it is seen that it is generally located in the valleys, close to the river edges, in the plains and on the slopes of the hills and mountains. In the rural areas of Kayseri, the landforms consist of plateaus, slopes, and valleys. These formations are curved long mountain ranges or stand-alone volcanic formations. These mountains are separated from each other by depression basins and high plateaus. There is a steppe climate in Kayseri, and the temperature difference between day and night is high. The prevailing wind direction is northwest, with the strongest winds and storms blowing from the south and southeast. Existing natural and environmental data were used in determining the locations of the slope settlements and especially wind and sun angle were effective.



[fig.1] Settlement view of Koramaz Valley

Due to the geomorphological structure of Kayseri, the rock-cut settlements and the daily lives that develop accordingly are a very important part of the identity of this region. The fact that the rocks are carved into a living space or the use of stone material, which is the main element of the architectural style unique to Kayseri from the existing rock structure, is the main factor in the formation of the cultural landscape. The caves and soft tuff formed by the geological structure of the region have been shaped by human hands and solutions that can serve different purposes have been produced. Volcanic tuffs are stones that adapt to ground movements with their light, flexible structures, are therefore resistant to earthquakes, and have

insulating properties due to their porous internal structure. Thanks to its easy processing feature, rock-carved spaces were formed in the settlements that were carved on the slope and became a living space those had different functions such as religious buildings, defence structures, living areas, barns, cellars, dovecotes, etc.

The settlements formed by carving on the slopes have been shaped in harmony with nature as a part of the topography. The spaces that meet the need for shelter are shaped according to the daily lifestyle and production habits of the users. Housing structures have a flexible structure that changes and develops over time according to needs, and they have reached today in a way to include solutions that meet the needs in the process. The rock-carved caves on the slope, which were used as residences in the past, are now used as storage and barns, as it is used as a barn on the ground floor and as a shelter on the upper floor (Aran, 2000).



[fig.2] Aerial view of Koramaz Valley

Koramaz Valley as a Case Study

Rural settlements, which are the main components of rural landscapes, are environments shaped by socio-cultural influences in line with geographical conditions. The traditional settlement order has been formed as a result of developments that have been transferred with the knowledge and practices of centuries, and which have continued until today, fully reflecting the socio-cultural and economic structure of the society and integrated with nature. The Koramaz Valley (Kayseri, Turkiye), which is considered within the scope of this study, has cultural landscape values that reflect the relationship between human and nature from past to present, shaped by the sheltered physical conditions it brings due to its geographical features and the cultural layers produced by communities with different ethnic origins. Koramaz Valley is located at the foot of Erciyes Mountain, a volcanic mountain located in the south of Kayseri. It is known that the settlement took its name from Mount Koramaz, whose highest point is 1900 meters, and the name of the place comes from the Cappadocian language (Umar, 1993).

Koramaz Valley is the longest valley in Central Anatolia after Ihlara (6 km). The water source at the bottom of the valley merges with the Sarimsakli water in the Gömeç Plain, where the water coming out of the İvriz spring in the Büyük Bürüngüz village moves along the valley and merges with the large and small springs (Cömert, 2008). Located on the slopes of the Koramaz Valley, which is 1100-1900 meters above sea level, the vineyard-gardens (wedge gardens) are close to the water at the bottom of the valley, and with this feature, protected from cold and winds, with the help of the humidity and greenery brought by the rivers, they have created their own microclimate according to the plateau because they are in the valley. In this way, it had a temperate climate and created fertile gardens (Asiliskender, Yöney, Kevseroğlu, & Elagöz, 2018). The topographical features and the presence of water have made these valleys, as in the Cappadocia Region, hidden settlement areas that cannot be perceived over the plateau and although it is close to the centre of the city (18 km), it has preserved its originality and integrity to a great extent, due to its rural character and being in the valley. A total of 442 rock-cut structures have been identified in the Koramaz Valley so far and

of these, 42 are churches and 8 are underground cities. Although most of the other rock-carved structures that can be identified are dwellings, dovecotes, or breeding grounds, it is thought that at least 11 structures were excavated as Roman rock tombs and 6 structures were excavated as Columbarium (Roman tomb) in ancient times (Yamaç, 2020). Koramaz Valley has been registered to the UNESCO World Heritage List Tentative List since 14 April 2020. Within the scope of criterion 5; Koramaz Valley is seen as an outstanding example of human interaction with land use and therefore multifunctional land use due to the large underground cities, dovecotes, cave churches, etc. (UNESCO, 2022)

The settlements in the Koramaz Valley are located in the most convenient places on the slopes of the mountains, as slope and pit settlements, in such a way that the lowest elevation of the valley passes through, and they are located in the south, facing the north-east side of Erciyes Mountain. Due to widespread agricultural activities and its location on the periphery of the city, the settlement pattern in the valleys defined as rural has developed as a single and two storey historical city morphology, with a relatively low percentage of open areas that form street and street fronts. Orientation has been considered in the lands where the slopes are mostly chosen as residential settlements, and the areas that are less inclined or flat and close to the water are reserved for agricultural activities compared to the settlements. From the settlements to the plateau, the physical environments have been replaced by pigeon houses and *cehriliks* (depot) that will be located on the slope and where unproductive soil can also be utilized. When the plateau in the upper parts is reached, agricultural production continues again, and wheat fields are common here.

Bio-Cultural Habitat Approach

Cultural landscape should be considered as the representation area where the interaction of human and nature living in a particular place takes place. Cultural landscapes of rural character contain tangible and intangible values. Rural cultural landscapes contain physical production landscape, morphology, water, infrastructure, flora, fauna, settlements, transportation, and trade networks as well as cultural knowledge, traditions, and practical knowledge. One of the greatest contributions of rural cultural landscapes as heritage is the continuity of bio-cultural diversity. The population decline that has occurred in the last fifty years due to the migration from rural to urban brings with it problems in the built, natural, and social environments in rural areas anywhere in Turkey as well as in Koramaz Valley. While planning studies are carried out in developed and developing countries; Under the title of Sustainable Cities and Communities, which is one of the development goals defined by the United Nations, it emphasizes the importance of contributing rural areas to the country's economy, balancing the migration tendency, the continuity of agricultural production, and the protection of the environment and natural resources (United Nations, 2022).



[fig.3] The interaction of nature and the settlement in Koramaz Valley

Although Kayseri Koramaz Valley has physical equipment with a semi-urban quality, the density and production-oriented life made it necessary to evaluate that region in rural character. Kayın (2012) emphasizes the necessity of protecting the rural landscape with a content that makes sense of its natural-social-cultural and structural relations with an integrated understanding, considering the traditions including beliefs, rituals,

collective behaviours, and crafts as well as the houses, streets, building materials and details in the settlements. Rural settlements, which stand out as a value, should be evaluated not only with their morphology, but also with all environmental and socio-economic data that make up the morphology. It requires that the conservation activities not only aim to protect the built environment, but also consider the elements that are in a state of protection within the environmental protection approach and protection policy, which will include ecological, agricultural, and cultural activities, architectural habits and lifestyles, by adopting the integrated landscape principle.



[fig.4] Section figure of Koramaz Valley settlement

Kayseri Koramaz Valley has been continuing its traditional life culture for many years. All these natural and cultural values create the unique living culture of the valley. To protect and maintain the natural and cultural heritage values of the valley settlements with a migratory population structure, where seasonal uses are more intense, these heritage areas should be protected with their tangible and intangible values and should be planned under the cultural landscape approach. Tourism phenomenon comes first among the suggestions developed to contribute economically to the world and to Turkey. However, in cases where tourism is not managed well, the pressure it creates on natural resources and cultural values, as in the Koramaz Valley settlements, causes negative results. To produce alternative scenarios for development and environmental sustainability in the Koramaz Valley, the suggestions for a low-density and environmentally compatible new settlement that will create alternative life, provide bio-cultural continuity in rural areas are as follows,

- The need for shelter in the rural landscape was developed with the vernecular architecture principle in line with the conditions of the period. However, these houses cannot offer the comfort concept in cities. Within the framework of this understanding, contemporary housing comfort and technologies should be made applicable with a new design approach. To carry out these applications, it is necessary to adapt alternative energy production technologies to the traditional housing typology and to examine the traditional local construction methods and materials in detail with a new perspective.
- Migration from rural to urban has also led to the shaping of education and health services in cities. Getting a good education and quality healthcare has become difficult in rural areas today. To move from the city to the countryside, solutions should be offered in order to provide important urban and social services in rural areas on a micro scale with a holistic approach.
- Social and rural development-oriented projects should be developed in order to carry out economy-based solutions. Opportunities should be created that include existing local values and at the same time generate income. The potential of the products produced in the past regarding the production landscape and the products produced by traditional methods should be investigated. Cooperation should be established to develop products that will make economic development sustainable. The possibilities of clustering and cooperatives should be evaluated on a local scale.
- In order to protect and sustain biodiversity (flora and fauna) and agricultural productions, it should be aimed to identify the species, to create an inventory and to provide the necessary incentives for reproduction.
- To protect the intangible heritage, it is necessary to record and document the traditions and celebrations, knowledge and practices of social life that have been made in the past and are still in memory and are likely to be kept alive. These values should be promoted, awareness of the area should be increased, and intangible heritage values should be preserved by keeping them alive.
- Reminders should be made of the crafts that were owned in the past and that are showing a decreasing trend today, and master training programs and applied training should be organized. Existing masters should be registered as experts in the villages. To increase the productivity and quality of the agricultural landscape, it should be aimed to adapt research and development and information systems in accordance with technology. In order to protect and sustain biodiversity

and agricultural productions, it should be aimed to identify the species and to provide the necessary incentives for production.

- Today, cultural routes planning, developed for the protection of cultural and natural heritage and the evaluation of economic potential, is an important element in the development policies of regions with local and unique values. As a new concept, cultural routes should be planned to include the cultural landscape elements on a route. While determining cultural routes, it should be developed with a planning approach focused on promoting the physical, natural and socio-cultural structure of that land. These route studies should also aim to preserve the land that carry cultural and natural heritage elements and gain their importance with this heritage, to develop rural tourism and thus to rural development. By means of route studies aiming to create a transportation corridor on a local, regional, or national scale, awareness should be raised with the tangible and intangible values of that geography, and it should be protected as living landscapes.
- Projects should be prepared within the structure of public institutions, universities, and NGOs. A participation planning should be made that will take care of the public interest and that the local people can be involved in the projects produced. Projects that will positively affect public structure and climate change and support social development in rural areas should be produced.

Conclusion

The value arising from the coexistence of the cultural and natural landscape in the settled areas in the rural cultural landscapes creates a potential for a new settlement concept with low density and living together with the natural environment in the rural landscape. In urban settlements with high building density, the built environment and hard surfaces in the urban texture cover the natural environment, creating an artificial living environment. In addition, life in this built environment has a negative effect on climate change due to the amount of carbon emissions it produces. When the threats arising from high-density settlements are evaluated, the development of urban settlements in low-density rural areas emerges as an alternative approach, as well as systematically increasing the ratio of natural surfaces in existing urban settlements within the city.

The planned realization of housing settlements in rural settlements with low construction and high rural density also provides an important opportunity for new urban life forms to be developed against climate change. As in the example of Koramaz Valley, cultural landscape areas where natural and cultural heritage come together can be presented as areas of opportunity due to their spatial and socio-cultural potential. In Turkey, it is possible to reveal the potential in these areas by explaining the cultural heritage values and the relationship of intangible heritage with urban morphological formation by morphological reading of cultural landscape areas in rural settlements where life continues. In this way, it will be possible to present low-density rural settlements as a new settlement model with a cultural landscape perspective, as an alternative to the dense urban settlement approach consisting of hard surfaces that increase the negative effects of climate change. The cultural landscape approach aims to reveal the characters of such areas and to ensure the sustainable use of these characters, with the tangible and intangible values they have, to protect the physical environment and to form the basis of a balanced and sustainable relationship between urban requirements and cultural heritage. In this way, while the heritage will be preserved, the values that make up the urban memory will be kept alive, and the social and economic-based development and sustainable development goals will be achieved.

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