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*Editors*

# Valorising Underground Built Heritage in Cappadocia





## *Heritage and Community Identity, 5*

A series of:



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© Cnr Edizioni, 2023  
P.le Aldo Moro 7  
00185 Roma

ISBN digital version: 978-88-8080-605-9



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Published by  
Consiglio Nazionale delle Ricerche  
Istituto di Studi sul Mediterraneo  
Piazzale Aldo Moro, 7 - 00185 Roma  
[www.edizioni.cnr.it](http://www.edizioni.cnr.it)  
[bookshop@cnr.it](mailto:bookshop@cnr.it)

*Editing by CNR-ISMed: Aniello Barone, Paolo Pironti, Giovanni Ruggiero.*

*This article/publication is based upon work from COST Action CA18110 “Underground Built Heritage as catalyser for Community Valorisation”, supported by COST (European Cooperation in Science and Technology).*

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# Reintroducing Karaya: Knowledge, Meaning, and Community Identity of an Abandoned UBH Landscape

*Jorge Magaz-Molina, Meryem Bihter Bingül Bulut, Bernard Bugeja*

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## 7.1 Introduction

Karaya is a semi-abandoned Underground Built Heritage (UBH) settlement in Cappadocia (Turkey) located in the proximity of the UNESCO site of the *Valley of Göreme*. This place had been proposed as a case study in the *First Training School* held in Naples in February 2020 within the scope of COST Action CA18110 *Underground4Value* (U4V).

*First Training School* offered to authors' trainee group the statement of *Knowledge, Meaning and Identity of Karaya*. To explore this concept and draw out planning and design ideas for this derelict UBH, a conceptual framework was developed based on previous studies [1] and the results of the U4V Short Term Scientific Mission [2]. The trainee group's proposal called for the enhancement of the underground settlement and its surroundings, by proposing a scientific itinerary focused on the rescue of local meanings and memory based on a multiscale and multi-disciplinary analysis. In the opinion of the trainee group, a key aspect of the case of Karaya was the territorial dimension of the UBH in Cappadocia and the particular landscape significance of the site linked with the relations of its former inhabitants and current visitors with the environment. The analysis of the historical landscape and its relationship with the UBH site, its scientific recording and interpretation, its local dissemination and tourist diffusion, and its cultural management were at the core of the proposal. A participatory process of recovery of the memory of the place and re-signification of the space considering GIS technologies and social media

real-time interactions was then included too. Participatory strategies for the design and cultural exploitation of the space in accordance with the scientific itinerary and UBH conservation were also proposed.

The final proposal was aimed at recovering the site as a cultural and educational infrastructure aligned as an eco-museum oriented towards domestic tourism and based on principles of environmental sustainability. The results of the Naples workshop were collected in a publication [3] which detailed the proposals contained in the first poster.

This chapter derives from the initial teamwork developed in Naples and aims to study the framework and possibilities for the implementation of actions for the enhancement of the UBH of Cappadocia as a sustainable tourist resource considering heritage conservation, local development, and environmental impacts. The chapter gathers and deepens the reflections developed on Naples around the heritage, community, and identity considerations attributable to the abandoned underground built heritage sites and the strategies of knowledge and re-signification of these spaces. We have tried to synthesise the territorial and regulatory context of the proposed case study, to analyse the problems that affect it, to explore the strategies to implement its enhancement and to outline a general itinerary.

### 7.1.1 Cappadocia: An Underground Built Heritage Network

Underground towns are a characteristic element of Anatolian landscapes. More precisely, the region of Cappadocia is a relevant area of excavated towns that could be explored as a network of Underground Built Heritage (UBH) due to their historical values, geomorphological uniqueness, and established tourist attractiveness. It is known that there are around 200 carved towns in the region, so Cappadocia offers multiple cases in which to study the different casuistry regarding underground cities in the 21st century: opportunities and conflicts on their conservation and integration into contemporary life, their potential as a tourist resource or the preservation policies and use strategies proposed. Among these sites, the Valley of Göreme and its adjacent area of the Nevşehir province, raises one of the most interesting cases, as it is one of UBH's main global attractions and has been declared a World Heritage Site.

Cappadocia owes its fascinating geological forms to numerous (now extinct) volcanoes which created a huge plateau, made of soft stone, grooved by deep torrential incisions that alternate with vast undulating plains disseminated by tabular reliefs (Fig. 7.1). The particular geological substratum of Cappadocia's landscape resulted from natural erosion to form a series of mountain ridges, valleys and pinnacles. Under semi-arid and arid-semi-humid climatic conditions, the dominant vegetation

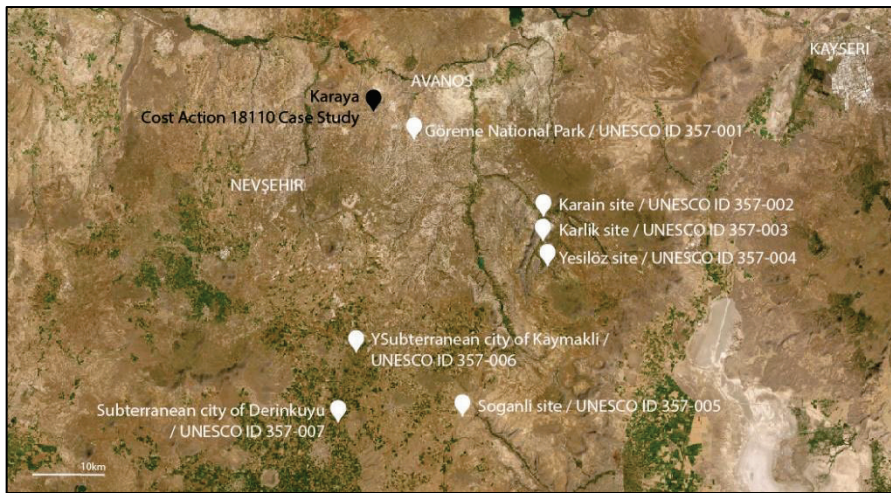
formation of the Cappadocia Region is steppe associated with the "dry forest" and "anthropogenic steppe section" ecological regions of the Central Anatolian area [4].

This steppe landscape has been the scenario for centuries of a particular human occupation in the form of excavated settlements that, many of them, have remained inhabited until today. The permanence of "troglodyte" communities until recent times can be explained as a response to the limitations of the environment, the ease of excavating tuff (the local rock) and the favourable factors offered by these dwellings in steppe conditions [5, p. 149]. It is believed that the origin of the subterranean cities of Cappadocia, like Kaymaklı and Derinkuyu, are the settlements that were initially dug out by Hittites during the Phygians attacks around the 12th century BC [6, p. 106]. The concept behind these hidden cities was to protect the population from any form of invasion, enabling thousands to reside in total secrecy. However, this form of habitat continued beyond the conflicts and expanded considerably and acquired more elaborate and visible accesses, coinciding with periods of prosperity. In this sense, the architectural dimension of underground settlements during the Byzantine Empire is remarkable [5, p. 149]. In the Late Antiquity and Early Middle Ages, besides defensive, domestic or utilitarian spaces, places of worship and retreat were excavated in the rock of the region. The Byzantine underground churches and monasteries of the Valley of Göreme are outstanding examples of the sophistication of underground rock-cut architecture.



*Figure 7.1: Cappadocia landscape close to Nevşehir: farmland, plateaus and Erciyes Mountain on the horizon. Source: M. Bingül Bulut (2022).*

These valued underground structures of Valley of Göreme, together with four archaeological sites of Cappadocia and the underground cities of Kaymaklı and Derinkuyu, were inscribed on the UNESCO World Heritage List in 1985, as a multi-location site (Fig. 7.2). This World Heritage Site was added onto the World Heritage List under criteria (i), (iii), (v) and (vii). The addition was mainly down to the irreplaceability of the post-iconoclastic Byzantine art, the fossilised image the structures create of past civilizations, the outstanding example of a traditional human settlement. However, this site and its singular landscape has become vulnerable due to aggravated natural erosion and increasing anthropic affectations.



*Figure 7.2: Sites included in the UNESCO World Heritage ensemble "Göreme National Park and the Rock Sites of Cappadocia" with ID357, according to the UNESCO website*

*Source: J. Magaz-Molina 2022. Diagram drawn on an orthophoto of the UNESCO Visor.*

### 7.1.2 The Valley of Göreme

The Göreme municipality is one of the best examples of opportunities and threats presented by the UBH sites (Tab. 7.1). This underground town of 2000 inhabitants, formerly known as Avclar, preserves one of the most artistic, geological and landscape ensembles of the UBH. It houses geological formations of the so-called "fairy chimneys" which, over the centuries, different communities developed in its cavities. The Byzantine communities had an important cultural centre in the nearby Valley of Göreme, whose testimonies are of great artistic value. From the abandonment of the Christian communities until the 1970s, when it

became a relevant tourist attraction, the area remained a rural settlement, with the last settlers being the Turks. Part of this Byzantine archaeological site was enlisted in 1950 (Göreme Open-Air Museum).

Göreme Open-Air Museum, as well as the geological formations (Rock Sites) and the surrounding areas, were declared National Park in 1986 (Göreme Vadisi ve çevresi) to guarantee its preservation as a buffer zone of the archaeological sites. According to Akkar Ercan [1, p. 260], it was the inscription of the Göreme National Park and the Rock Sites of Cappadocia as UNESCO World Heritage that boosted its development as a world tourist attraction.

*Table 7.1. Opportunities and threats of the tourism offer around the Cappadocia UBH*

<b>Opportunities</b>	<b>Threats</b>
Renowned place on the global map thanks to the listing on the WH List; easily accessible	Concentration of excursion routes, mass tourism; loss of positioning due to overexploitation
Accumulation of many historical and cultural assets	Lack of sustainable action plan and protection figures
High tourism potential	Heritage damage
All year-round visitors	Depletion of resources (eg: water)
Supporting tourism with complimentary activities	Gentrification, tourist thematization and display of historical falses
Immediate area with significant untapped cultural resources	Increase in waste and vehicular traffic, overbuilding

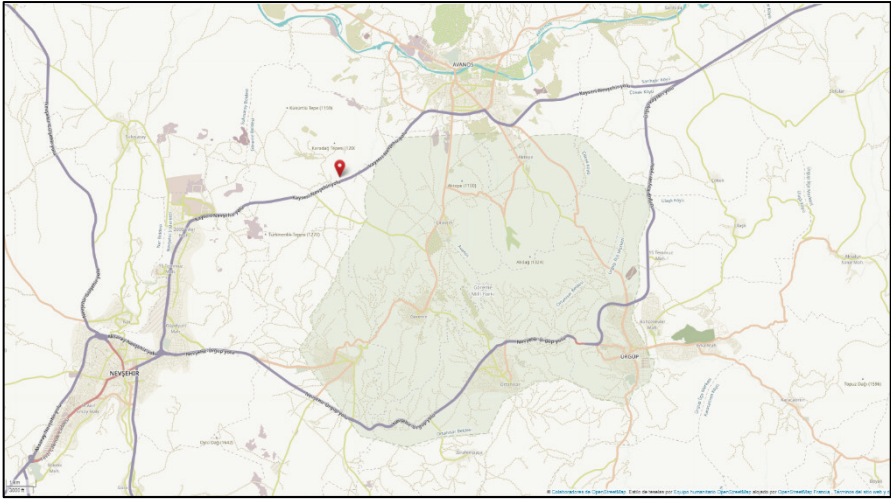
Protection figures applied on this site had limited results, due to the lack of supervision by permissive local administrations. Uncontrolled real estate development and touristic activities had a consequential impact on the landscape, environment, fertile soil and the UBH itself [1, p. 264], [2, p. 271]. For this reason, the National Park was suppressed by presidential order in 2019 to reformulate the protection and management of the area. However, this measure raised doubts about the possible detrimental effects it could have on cultural heritage. In any case, the area monitored by UNESCO maintains the boundaries of the former National Park, but it should be noted that the remaining perimeter of the archaeological site of the Open-Air Museum is very limited. This means that the effective protection boundary is reduced to the core area with representative underground enclaves and geosites.

Although tourism is an efficient instrument for sustaining geographically disadvantaged communities, it has also been shown to be a factor of social, environmental and heritage risk when it is not properly managed [7]. As highlighted in the Action's case study, the concentration of activities and the lack of a master plan for the museum and its environs (guiding environmentally, socially and heritage sustainable tourism) has resulted in the displacement of the local community and the lack of sustainable perspectives, thus threatening the integrity of the archaeological sites. Like other well-known cities and heritage sites which have become tourist destinations, the town of Göreme and the nearby archaeological sites were, until February 2020, suffering from a problem of mass tourism, which had a negative impact on several aspects [1, p. 263], [2, p. 271]. According to De Gregorio's diagnosis, this has resulted in degeneration and loss of local values derived from the over-commercialisation of the site and the sale of traditional cave residences to investors for tourist accommodation. While the need for a territorial master plan regulating the exploitation of the different areas and the control of the landscape transformation is an urgent need, the Action case study also concluded that it is vital to explore tourism solutions based on sustainability. In the framework of studies carried out by the Action, local stakeholders identified the nearby UBH enclave of Karaya as an area of opportunity for developing a pilot project of eco-tourism.

This site was another excavated settlement that used to host the villagers until the 1960s before moving to Göreme, according to local memory. Today the site is semi-abandoned, thus offering the possibility for the exploration of sustainable tourism management strategies and planning, enabling the decentralisation of the tourist masses in Göreme.

## 7.2 Karaya as a Site of Opportunity

Karaya is within the boundaries of Nevşehir municipality, and it is located near the borders of the former Göreme Valley and Surrounding Areas National Park that remains as UNESCO perimeter (Fig. 7.3) and is strategically placed north of the highway connecting the cities of Nevşehir and Avanos. No known archaeological records point to this enclave as being particularly unique, but it offers a scarcely altered example of the underground living and working spaces of the communities that inhabited the cave dwellings. The settlement is hidden in a canyon that carves the plain carpeted with vineyards, fruit trees and crop fields that draw the agricultural pattern of the plateau bordered by the hills. The caves preserve rooms, cellars, wineries, dovecotes and stables that reflect a way of life closely connected with the territory.



*Figure 7.3: Location of Karaya site (red point) close to the boundaries of the former Göreme Valley National Park.*

*Source: OpenStreetMap*

This enclave has been known by several names: Karakaya and Acısu, due to water resources in it which is a well-known spring of sodium bicarbonate and alkaline waters locally used in the treatment of stomach and intestinal disorders and travertines formed by calcium bicarbonate cold waters. According to local knowledge, this part of the canyon was the most important recreational and picnic area of Avanos for many years. The fieldwork carried out by the authors in mid-April 2022 (Fig. 7.4) has identified the presence of several residents and the development of farming activities linked to tourism activities displayed in the area of Göreme.

This area is outside the main tourist routes, which go at most as far as Avanos. However, Karaya is actually within easy access: 6 km from the site of the Fairy Chimneys and 9 km from the Göreme Open-Air Museum. It is also 6 km from Avanos, into which the river Kızılırmak flows through the Karaya valley itself. Nevşehir is 14 km from Karaya, and although the ancient subterranean city is not among the attractions of the zone, the agricultural valley in which it is located has other underground towns, such as Nar or Sulusaray, easily accessible from Karaya.

In terms of tourism, Karaya's surroundings are well-known thanks to the Cappadocia Landart Sculpture Park, designed by Andrew Rogers and installed between 2007 and 2009. Among the pieces displayed, 'The Gift' should be highlighted, as a stone profile of a giant horse related to the historical horse-breeding activity of the area.



*A view from the Karaya Valley*



*Karakaya İçmesi (Mineral Water Source)*



*Karakaya Traverterns*



*Unregulated buildings in Karaya*



*Horse Farm in Karaya Caves*



*Dovecotes (Pigeon Houses)*

*Figure 7.4: Album of the fieldwork in Karaya. Source: M. Bingül Bulut 2022.*

Although the area's industrial mining activities represent a limiting factor in the pedestrian and cycling network expansion strategy (aiming to decentralise the Göreme area), it can be argued that proper land-use planning could make them compatible. Even though the Avanos-Nevşehir highway is a major barrier, it can be easily overcome. An interesting idea would be to explore the possibility of the creation of a pedestrian connection between the Avanos and Nevşehir valleys, thus taking advantage of the valleys and fluvial corridors. This could serve as an axis



for a metropolitan park, as was proposed by the Action case study of the 3 Country Parks (Fig.7.5).

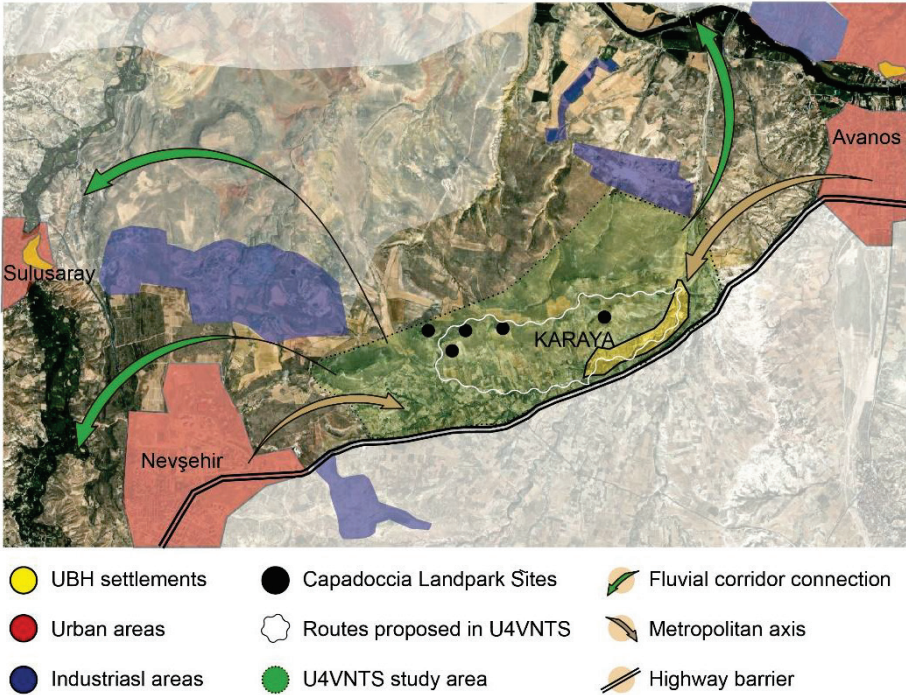


Figure 7.5: Study of possibilities for Karaya. Source: J. Magaz-Molina 2022.

Diagram drawn on an orthophoto of the UNESCO Visor

As already mentioned, within the framework of the First Underground4Value Training School, it was considered that the values surrounding the UBH settlement of Karaya extended to its immediate environment and the intangible aspects of the traditional use of the territory and its present-day experience. For this reason, it was advisable to plan an eco-museum of territorial scope structured by pedestrian and cycling routes that would link different aspects of the culture of Cappadocia. Along with the elements surrounding the UBH site, the authors considered: the cultivated fields of fruit trees and vineyards and their relationship with the gastronomy, the clay deposits and the local crafts, the horse breeding, the hills that defined its horizon and in which artistic action of land art by Andrew Rogers was displayed. Besides, the trainee group proposed to integrate the memories and expectations of the local communities into a multidisciplinary study itinerary of the site's characteristics to provide content and meaning to an eco-museum that

would relate the landscape, the traditional uses of the communities and the historical site of Karaya.

### **7.2.1 Local Identity and Intangible Heritage as a Resource for Sustainable Development**

As a semi-abandoned space, Karaya highlights the demographic and opportunity imbalances surrounding Göreme but also offers many variables for analysis in the general framework of the U4V Action. In this rereading of our initial proposal, we have been able to confirm that identity and meaning are powerful concepts closely linked to heritage and landscape. As it has been pointed out, “identity” and “heritage” are contingent concepts upon one another: “no identity without an act of remembrance of some origin(s) and that, which is remembered as origin(s), is constructed into the identity’s heritage” [8, p.17]. However, this act of remembrance should be focused on local communities’ everyday life recognition and shared common values promotion. According to the Recommendations of the Council of Europe, heritage enhancement should be oriented towards the support of local communities and as a vehicle for promoting respect for human rights [9]. Similar orientations have been put forward by UNESCO. Moreover, the protection of tangible and intangible heritage and the preservation of the cultural expressions of local communities have already been included in Agenda 2030 as catalysts for environmentally sustainable social cohesion and economic development. The perception of the territory by the local communities is also the central argument of the European Landscape Convention [10], which also establishes an operational framework for its planning and management with a view to harmonising its transformations and maintaining its characteristic elements through participatory processes.

Therefore, the process of redefining Karaya's identity to position it as a pole for the dissemination of local culture requires an itinerary of multidisciplinary knowledge to record the community meanings, the characterization of the landscape in which it is inscribed, reconstructing the history of the enclave and defining its archaeological or geomorphological characteristics. All these stages are an opportunity to gather around Karaya’s technical and scientific staff, former neighbours, inhabitants of nearby towns, and visitors and make the study process itself an attractive and accessible event to relocate Karaya in the circuit.



*Figure 7.6: General view of the canyon of Karaya. At the top of the hills, the Land Art sculptures of Andrew Rogers are recognisable. In the foreground, the excavated caves of the town can be seen, some of them are inhabited, and solar panels have been installed.*

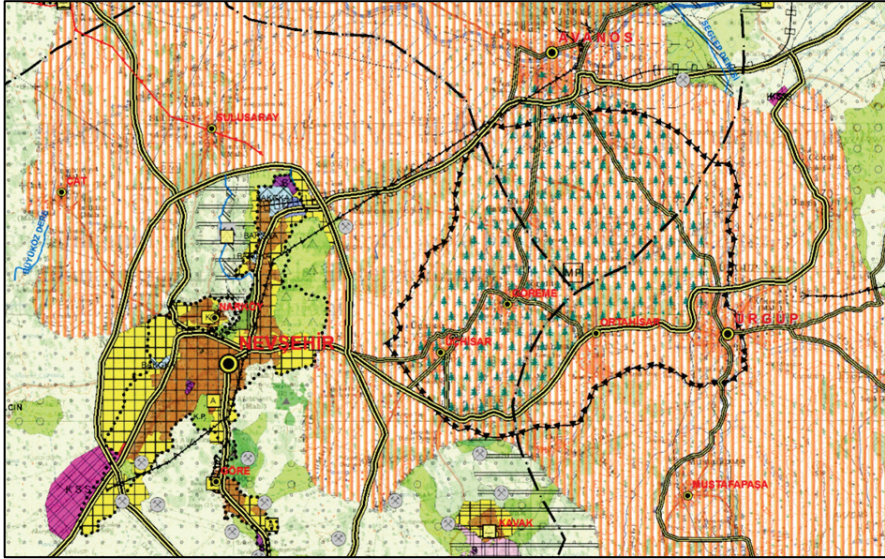
*Source: M. Bingül Bulut 2022.*

### 7.2.2 Regulatory Framework

“Cappadocia” region is not an administratively defined or clarified area in Turkey [11], but in the research on the cultural landscape character of the region by Tuna Yüncü [12], the borders of the Cappadocia Region are known as the area between Salt Lake in the west, Erciyes Mountain in the east, Seyfe Lake in the north and Hasan Mountain in the south. The region covers Nevşehir, Ürgüp, Avanos, Karain, Karlık, Yeşilöz, Soğanlı areas and Kaymaklı and Derinkuyu underground cities, the area bordered by Hasan Mountain, one of the extinct volcanic mountains, to the south, and Erciyes Mountain to the east. As already mentioned, singular parts of Cappadocia were included in the UNESCO World Heritage List in 1985 with the name “Göreme National Park and the Rock Sites of Cappadocia”. UNESCO enlistment meant the Valley of Göreme and the surrounding area were declared as “Göreme National Park” with the decision of the Council of Ministers, which was published in the Official Gazette dated 25/11/1986 and numbered 19292 [1]. Within the area defined as Göreme National Park, there are settlements with historical and cultural values such as Ürgüp, Göreme, Uçhisar and Ortahisar, including the so-called fairy chimney geosite.

The area, including the Göreme National Park, Karain, Karlık and Yeşilöz areas defined within the scope of the World Heritage Site, was

declared as the “Cappadocia Culture and Tourism Conservation and Development Zone” (Fig. 7.7) simultaneously with the decision of the Council of Ministers dated 22/10/2004 and numbered 2004/8328. Therefore, both the national park protection status was brought within the area defined as the World Heritage Site and the Culture and Tourism Conservation and Development Zone status.



*Figure 7.7: Map of Kırşehir-Neveşehir-Niğde-Aksaray Planning Region. Red-Stripped Pattern shows the Culture and Tourism Conservation and Development Zone*

*Source: [https://webdosya.csb.gov.tr/db/mpgm/editor-dosya/file/CDP\\_100000/knna/K33\\_29042016.jpg](https://webdosya.csb.gov.tr/db/mpgm/editor-dosya/file/CDP_100000/knna/K33_29042016.jpg)*

Considering that there are many settlements and protection status affiliated with different central and local administrative units, it was deemed necessary to establish a special management model within this cultural and heritage area by the Turkish Authority. In 2019, a new era began in terms of protection in the Cappadocia region. In this context, the Law No. 7174 on the Cappadocia Area entered into force in June 2019, and subsequently, the Presidential Decision No. 1673 on 21.10.2019 and the decision of the Council of Ministers no. 86/11135 dated 30.10.1986 was repealed and the status of “Göreme National Park” was cancelled [1]. The Cappadocia Area Presidency was also established within the scope of the relevant law [1]. In the coordinates given in the annex of this Law, the boundaries of the “Cappadocia Area” were drawn and the definitions

related to the area were made (Fig. 7.8). The area boundaries have been determined to include the protected areas within the provincial borders of Nevşehir and the perimeter of the Culture and Tourism Conservation and Development Zone. The law aims to regulate the issues related to the protection, survival, development, promotion, transfer to future generations, planning, management and inspection of the historical and cultural values, geological/geomorphological texture and natural resource values of the Cappadocia Area.

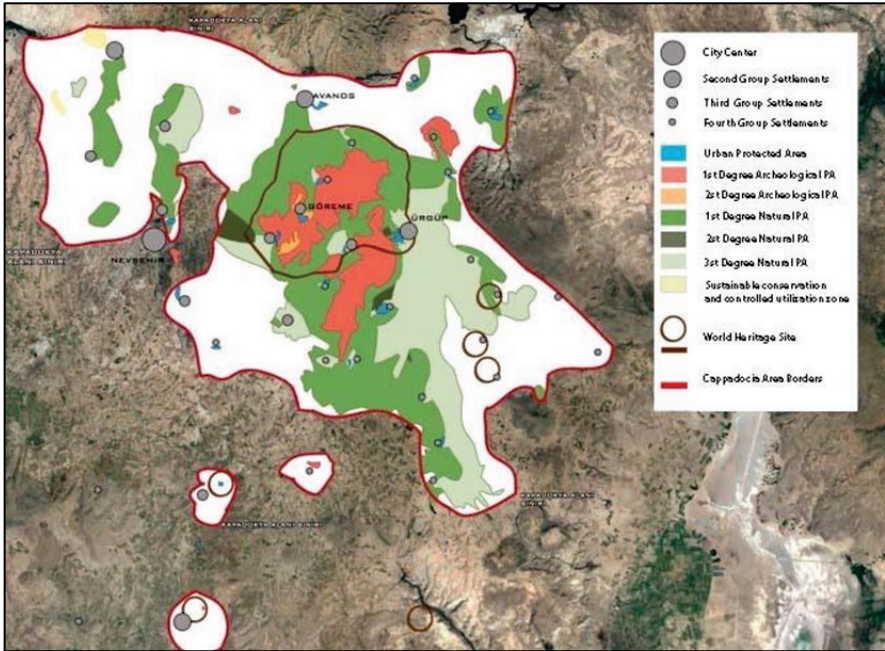


Figure 7.8: The Cappadocia Area Boundaries determined by Law No. 7174.

Source: Şakar, 2020) [9]

For a more detailed study, we refer to Solmaz Şakar [13], who studies the planning, legal and administrative measures applied within the protection area. This work offers an interpretation of the constraints that have influenced the conservation of cultural heritage in Cappadocia from 1960 to 2020 and offers a focused case study on Göreme.

### 7.2.3 SWOT Analysis

In order to synthesise the possibilities of proposing an action to enhance the value and sustainable exploitation of Karaya for tourism, a SWOT analysis has been carried out. In the analysis, strengths, weaknesses,

opportunities, and threats are determined. A strategic view of the area can be put forward by examining the analyses published about Cappadocia tourism. In addition, field observations and previous work done by the First UBH Training School groups were also considered. By considering this data and the current situation, this exploration seeks to draw possible futures for this tourism resource.

*Table 7.2. SWOT Analysis of Karaya*

<b>Strengths</b>	<b>Weaknesses</b>
Consolidated tourist area	Expensive destination for domestic tourism
Cappadocia panorama viewpoint	Lack of certain legal protection status
Land Art intervention	Hard connectivity by pedestrian and cycle routes with the area of Göreme due to highway
Relics of old-style life routines Closeness to the roadway	
Interesting geo-formations, habitats and well-preserved cave-houses	Need for investment to provide access, security, and sanitation networks
Testimony to the relationship of humankind with its environment	Need of coordination between stakeholders
<b>Opportunities</b>	<b>Threats</b>
Nearby cities could be interested on an agro-natural metropolitan park	Erosion risk due to vehicle, bicycle and pedestrian traffic flows.
Easy access by pedestrian and cyclable routes from cities close by	Risk of tourist theming of the site and display of historical falses
Existing environmental connections through fluvial corridors	Irreparable transformation of underground structures
Unexplored archaeological site	Erosion of caves and stability risks
Possibilities of implementing an interdisciplinary scientific research program	Possible impact on the habitat and heritage of actions to adapt the site to tourism
Site to satisfy local stakeholders' desire of outlining a local culture, gastronomy, and manufactures	Landscape impacts provoked by nearby mining activities, industrial poles, or solar parks

Table 7.2 shows that Karaya's strengths and weaknesses arise from internal factors, while threats and opportunities are created by external environmental conditions to increase the value and sustainable use of Karaya for tourism.

**As internal factors:** Karaya's logistics is very easy-to-integrate into current tourist destinations of the region as it is easily accessible by the Nevşehir - Avanos Road. However, access by bike or on foot is harder and makes the area disconnected. Natural geoformations of the valley make the area attractive and give a chance to discover land art on the hills where the scenic view of the region is well known. Also, relics of former-style life routines in the valley are one of the main strengths, such as farming activities, live stocking, grape crops, and pigeon houses. In Karaya, there is an opportunity to experience human-nature interactions, but at the same time, there is a need for investment to provide basic requirements such as security, access, and sanitation networks nowadays.

**As external factors:** opportunities development of an agro-natural metropolitan park by the participation of nearby cities, existing environmental connections through fluvial corridors and being a site to satisfy local stakeholders' desire to outline a cultural approach to local heritage like gastronomy, traditions, and local manufactures can be listed. But it should be noted that mass tourism in the region can have an impact on the site and on the habitat, specifically land leasing for balloon business, nearby mining activities, industrial poles, and solar parks.

The following needs have been identified:

- Defining a community decision-making process
- Articulation of a monitoring and evaluation organisation combining different actors for the implementation of a programme of study and heritage enhancement, environmental evaluation, and tourism exploitation.
- Drafting of a master plan bringing together the measures envisaged for the conservation of the values identified in the previous stages at different scales.
- Defining areas of protection: protected areas/core areas/buffer areas

Three issues of great complexity and relevance arise when considering the enhancement of Karaya:

- Its status as a semi-abandoned settlement, which places this enclave midway between an archaeological site and a ruin and a living urban ensemble.
- The "acceptable limits of change" that should be defined when considering any intervention. Exploring the possible elevations resulting from the recovery of the settlement, the protection of unique panoramas and the drafting of a view management plan are necessary studies. These tasks are particularly relevant with

regard to the insertion of contemporary elements or technological installations and devices as could be carpenters, flooring, solar panels or supplies networks. Removable structures that do not alter the heritage and habitat are recommended.

- The question of guaranteeing "authenticity" to ensure that the space is not thematised or falsely historical. Ethnographic, historical and archaeological studies and the scientific monitoring of the museum programme proposed for this, and any other similar space, can offer the appropriate resources to implement reliable and interpretative historical recreations.

### 7.3 Towards a Heritage Management Proposal for Karaya

De Gregorio's draft of the assets of Karaya with potential for heritage enhancement includes geomorphological elements (sulphurous water springs, cones, canyons), urban and architectural elements (dwellings, cisterns, cellars and dovecotes excavated in the caves), cultivation areas (vineyards) and recent artistic interventions in the territory (Andrew Rogers Land Art Park). The heritage value of Karaya is, therefore, not limited to the underground inhabited enclave. The area of Karaya, as a whole, offers a unitary system of meanings of the relationship between human communities and the environment, and whose anthropic testimonies characterise this enclave in a singular way. A question relevant to the interests of the Action arises here: how can the cultural planning of the UBH address the relationships of meaning and functionality of an asset with its immediate surroundings? Heritage enhancement operative framework review could offer methodological guidance for a master plan for the Karaya site.

According to Varriale's definition of "underground built heritage" [14], UBH is understood as human-excavated underground sites that have material or immaterial cultural significance, capable of fostering socio-economic regeneration initiatives. Varriale also includes in this concept those aboveground structures she defines as "UBH annexes", which explain and give meaning to the underground ensemble, such as mining installations. To delimit the scope of this definition, Varriale proposed the following general rule: "aboveground annexes of UBH structures can be regarded as belonging to the same class as the main part of the structure only if they do not significantly characterise the structure itself and do not play a major role in its main function". Considering the large presence of underground cities in Cappadocia, it is interesting Genovese's approach [15] for underground cities. With the goal of providing operational actions for interventions on urban districts or entire cities carved in the rock, Laura



Genovese has formulated the term "Underground Historic Landscape", based on the UNESCO framework of the "Historic Urban Landscape". This conceptual framework offers broader perspectives for the analysis of the UBH and for exploring urban strategies of conservation. The figure of the Historic Urban Landscape has acquired considerable currency by incorporating the paradigm of sustainability - economic, social and environmental - into the framework of urban heritage conservation strategies for UNESCO sites. However, as Lalana Soto [16, pp. 24-26] points out, this figure arises to respond to the problems of urban heritage, understanding the city from a broad and dynamic conception, as an environment in a permanent process of change. Guidelines and recommendations proposed by UNESCO for the UHL can be a reference for addressing the heritage management of Anatolian underground cities and towns such as Göreme, Kaymakli, Uçhisar or Avanos. However, it is questionable whether the case of Karaya could fit the figure of a "Historic Urban Landscape", as it is a semi-abandoned settlement whose enhancement is influenced by the rural component of its surroundings and its condition as a scarcely altered enclave.

Seeking operational frames of reference for developing a master plan in Karaya, it would be worth considering other categories established by UNESCO that could attend to this component of anthropized territory in which the cultural legacy of the communities is recognised in the landscape patterns. Karaya's Master Plan could be conceived as a historic town - (I) no longer inhabited, which provides archaeological evidence and satisfies the criteria of authenticity and conservation that can be easily controlled. However, the territorial component could be better aligned to the requirements of a cultural landscape site, as it represents a combined work of nature and human activities in which a sustainable traditional exploitation of the resources of the area and a spiritual relationship of the communities with nature can be interpreted. In this sense, its interpretation as a "cultural landscape" would contribute to the establishment of a modern sustainable exploitation of the territory aligned with the objectives set by the Council of Europe [10], [17] with the implementation of the European Landscape Convention.

Attending to the exceptional geomorphological values that Karaya, in particular, and Anatolia, in general, enjoy, it might even be interesting studying the operative solutions developed for the implementation of the Geoparks, as it has been promoted in Kula (Turkey). The Geopark tends to promote an integrative approach to geology, biodiversity and heritage and a sensitive approach to the needs of local communities. But above all, Geopark promotes the sustainable development of these territories. Management solutions applied in territories endowed with relevant UBH

sites, such as the Cave Houses of Guadix (Spain), the mining territory of the Colline Metallifere (Italy) or Les Causes du Quercy (France) have opted for this strategy to promote sustainable tourism.

In case of enhancing the food production dimension of the landscape of Karaya, another more flexible reference in terms of tangible heritage integrity to consider in the operational design of a strategic plan could be the management plans of the Globally Important Agricultural Heritage Systems (GIAHS) monitored by FAO. FAO states that a GIAHS is a living and evolving system of human communities in an intricate relationship with their territory, cultural or agricultural landscape or broader biophysical and social environment. From this perspective, it is valued how the accumulation of knowledge transferred between generations responds to the potentialities and limitations of the biological and geological environment, shaping an evolutive landscape. In contrast to other heritage approaches, GIAHS are based on dynamic conservation strategies that allow landscapes and communities to evolve and respond to new challenges.

### **7.3.1 Scientific Itinerary for the Knowledge of the Abandoned Underground Built Heritage Landscape**

As a methodological approach to the knowledge on the identity and meaning of Karaya, already in the Naples teamwork, it was suggested the implementation of "Landscape Character Assessment". This methodology [18] offers a description and classification of the landscape character, through which the differentiating elements and patterns of one area from another can be pointed out, which does not necessarily make it more valuable, but allows for the identification of singular areas at different scales. In this methodology, historical, regional, symbolic and social sensitivity is condensed, while multidisciplinary is also a priority. Landscape assessment is particularly suited to protect views of heritage sites, as well as to articulate participatory processes through which to gather community meanings.

The recording of geospatial data and its uploading to the web allows solutions such as the Landmap of the Kingdom of Wales, which offers a record of the characteristics, qualities and influences on the landscape through five thematic layers of spatial information: geological characteristics; habitats, visual and sensory, history, culture. The characterisation of the recognizable elements of Karaya in particular, and the Göreme area in general, should be wide. The individualization of the different cultural assets should not be limited to recording buildings or underground spaces, but should also take into account unique geological

formations, monumental trees, vegetation and ecosystems or crop fields. Attention should also be paid to intangible heritage, recording traditions and oral expressions, performing arts, spaces of social use, rituals or festivals, and trying to geo-reference spaces and uses linked to the relationship between humankind and nature, or spaces where traditional handcraft techniques can be identified. This cultural approach to the landscape offers a link to relate aesthetic, morphological, and intangible values and recognition of the local community. In this sense, the experiences on the study and management of the cultural landscape proposed by the Andalusian Institute of Historical Heritage can be taken as a reference. These tasks are already being taken by different institutions across the world, not only to have a historical record accessible to researchers, but also to offer an online resource for dissemination among its inhabitants. But in addition, these actions help to generate interactive materials that add value to a tourist destination as they facilitate the discovery of the territory by visitors. It is unnecessary to generate differentiated products: the heritage agency of the province of Barcelona, for example, has a georeferenced heritage inventory of general access useful for discovering scattered assets in the territory.

Palimpsest territories such as Karaya offers the ideal substrate for historical and archaeological studies of the landscape through methodologies such as Historic Landscape Character that propose an analysis of field patterns, historical map records, documentary evidence, current land use records, archaeological interpretation, aerial photography, assessment of previous land use, among others. In the same line is the Landscape Biography conceptualised as a method of registering and managing historic landscapes. Knowledge about landscape multidimensionally changes, as cultural, social and economic aspects, is also needed. In Karaya's case, this type of analysis might be an exploratory tool to highlight practices, memories and stories of the site.

In addition to the studies that a historical landscape and its management require, the enhancement of a UBH also demands a specific study as a singular structure. It would be advisable to detail the characteristics of the different caves in Karaya, to specify their origin and nature, to evaluate their potential threats, and to explore the possibilities for adapting to the changes required for their safe use today.

### **7.3.2 Management Roadmap Proposal**

As noted at the beginning, this contribution was intended to outline a proposal for Karaya as a sustainable tourist resource considering heritage conservation, local development and environmental impacts. To this end,

an approach has been made to bring together the actions that should be considered to develop a sustainable open-air museum in Karaya that would allow the economic development of local communities, the conservation of heritage and the preservation of the environment. This open-air museum or eco-museum is conceived as a territorial cultural management tool capable of integrating built assets, nature and intangible heritage and encouraging the participation and recognition of local communities.

In line with the initial proposal, this contribution involves technological solutions and an operational itinerary that integrates researchers from different disciplines, management professionals, entrepreneurs, local administrations, managers and representatives of civil society. It is considered appropriate to program a transparent development of the project through the dissemination of reports and the promotion of hearings, the organisation of meetings or field visits, and the dissemination of scientific results. As mentioned above, the information and data generated in the framework of this initiative could feed a spatial data infrastructure.

To implement this action, it would be advisable to set up a coordinating office to lead the initiatives, with economic and administrative capacity. This body will be able to organise actions and reach agreements with other local and regional administrations, local agents and landowners. Among the first tasks envisaged in a hypothetical roadmap, the following could be considered:

- i. Delimitation of the perimeters of the area of action and the definition of protected areas for their natural or cultural and archaeological values, immediate buffer zones.
- ii. Defining the general planning guidelines and establishing pedestrian and road access.
- iii. Setting the appropriate legal figures for the development of the project in this area.
- iv. Reaching agreements with landowners who may be affected by the initiative.
- v. The identification of stakeholders interested in participating in a sustainable programme of food production or service provision farmers, livestock breeders, craftsmen, hostellers, etc. Artisans, entrepreneurs or companies can enrich the environment of Karaya with contents and activities and make this space a place of production and consumption of km 0 products.
- vi. Dissemination of the actions carried out: publication of studies, dissemination of the geolocalized registers on the network, cultural and environmental awareness campaigns, and tourism promotion.

- vii. Creation of a brand image and promotion of services and products under sustainable quality seals, dissemination of activities on social networks.
- viii. Organise a project implementation itinerary that includes several phases, and that integrates the knowledge of researchers and universities, the interests of local agents and facilitates community decision-making processes.

This study should be carried out in the first phase, together with a major analysis of possibilities and limitations. Among the actions to be considered are the following:

- i. Landscape Character Assessment (LCA) of the Karaya site. As mentioned, LCA is recommended as it attends to natural elements (geology and geomorphology, climate, soils, flora and fauna), cultural elements (land use, settlement patterns, parcelling), social elements (meanings and memory), perceptual elements (preference, sounds, visual touch - form, pattern, texture, colour). From the results of this study, it is possible to identify the visuals and panoramas that are susceptible to protection.
- ii. LCA data can be supported by a complementary flora and fauna survey. This study could identify elements and areas of environmental, geological or agro-cultural value to define guidelines for the delimitation of access areas and protected zones. It could also provide a census of species and specimens.
- iii. Historical, cultural and archaeological study of the area also supports an LCA and could provide an inventory of elements and a catalogue of assets to be protected. This data would also suggest recommended boundaries for protected and accessible areas.
- iv. A comprehensive study of the UBH is recommended. Essential actions could be the graphic and cartographic description, identification of elements and spaces, ensuring their stability, cave monitoring and studying their possibilities to adapt to the needs.
- v. The search for the identity, meanings and memory attributed to Karaya requires social-community work. In nearby localities, the recording of oral memory, experiences and collective meaning is suggested. Intergenerational community meetings and workshops on traditional activities could be tasks for searching for intangible assets and values. These studies can help identify recoverable activities or workshops that could give life and shared meanings to the space.

- vi. Study the tolerable margins of visitors to ensure the preservation of heritage and habitat.
- vii. Raising awareness of the actions carried out: guided visits to Karaya, meetings with local communities, and planned tourist visits to the archaeological excavations.
- viii. A community process requires providing the tools for citizen participation. Transparency in itineraries, actions and results is recommended.

A second phase of the project would be aimed at defining action guidelines for the definition of an Eco-museum based on the results of the scientific study developed in the previous phase:

- i. Administrative procedures to obtain cultural and natural protection for the singular elements identified.
- ii. Holding meetings with different local groups, administrations, researchers and entrepreneurs to agree on activities, contents and meanings for the museum space.
- iii. Drafting of a master plan for an open-air museum that guarantees the conservation of the unique elements and allows for sustainable exploitation of the settlement and the surrounding landscape. This document should be the result of a community decision-making process, and it should include the definition of perimeters, access and circuits and accessible or restricted areas; specify protected areas and heritage elements, tolerable margins of change and design principles for new actions; detail the caves likely to integrate new activities or accommodate cultural uses and visits or new residences; identify actions aimed at guaranteeing the safety of visitors or inhabitants; concretise areas and routes restricted to the passage of motorised vehicles not involved in the management of the space; specify land uses of immediate areas and precise zones susceptible to alteration by industrial activities; define tolerable visitor volumes conditioned on the outcome of impact studies; list of activities that may be carried out in the ecomuseum area and specify those that are prohibited; to specify eco-friendly integration solutions for energy, water and sewerage supplies, etc.
- iv. Implementation of pedestrian and cycling connection networks with surrounding enclaves.  
Promotion of dissemination activities of the initiative to introduce the project to tour operators and visitors.

As pointed out, this proposal seeks to bring together a community decision-making process with the operational guidelines and knowledge obtained from a process of scientific study and recording of the memory and expectations of the local communities to make this space an area of local recognition and a pole of cultural dissemination. A more detailed analysis of the casuistry would offer more precise guidelines and notions to outline the possibilities of this initiative.

#### 7.4 Some Final Remarks

The exploratory work developed around the Karaya case study opens up potential research topics on the role of UBH as a characterising element of the cultural landscape. It also outlines the scientific and management challenges raised by the enhancement of abandoned UBH sites and the subsequent defiance of the reconfiguration of meanings for local communities. Both issues are relevant in planning participatory decision-making processes aimed at heritage enhancement and centred on the people who live in, remember and know the territory.

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## HERITAGE AND COMMUNITY IDENTITY, 5

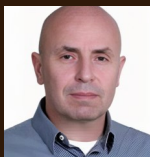
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### Valorising Underground Built Heritage in Cappadocia

With their multiple values, Underground Built Heritage sites and artefacts are precious resources that should be protected for now and future. With their generative potential, the UBH sites and artefacts can be effectively used as catalysts for attaining community valorisation, achieving sustainable regeneration and development, and improving the quality of life in different localities. This book, focusing on the UBH potentials of Göreme and the Cappadocia region in Turkey, documents the research and living lab experience conducted within the COST Action CA18110 Underground4Value framework between 2019 and 2023. It develops a reliable knowledge base concerning the UBH as the catalyst for community valorisation, heritage conservation, urban and rural regeneration, and sustainable community development in Cappadocia. Within the framework of the COST Action, a participatory and inclusive planning process was followed to cooperate with the local stakeholders and the community. Hence, the book presents this participatory and inclusive process and outcomes of the living lab and Strategic Transition Practice approach. Besides, it presents studies on stability monitoring and controlling, geological and geomorphological mapping and visualisation of the UBH, artificial intelligence text-mining, and sentiment analysis methodologies for discovering tourist views and the complexity of heritage conservation, sustainable regeneration, and tourism development in Göreme and Cappadocia.



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