

A heritage project emphasising bioclimatic values: Troglodyte architecture in the Mediterranean

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Living inside the Cliff is a project of research, documentation and preservation of cultural heritage, with the aim of carrying out a systematic analysis of troglodyte architecture in the Mediterranean area, as an archetype that emerged in different places, cultures and times, highlighting its adaptation in different environments, its heritage value and the opportunities it offers in its preservation for various functions, and taking advantage of the qualities and hygro-thermal constants that the soil offers for bioclimatic comfort. Two essential types of troglodyte architecture have been considered: the one that makes use of the natural voids offered by the geology of the cliffs, and the one that results from the hollowness of the rock, in easy-to-excavate terrain.

The Mediterranean basin is home to exceptional places of troglodyte architecture. Some of these places, registered as World Heritage by UNESCO, are today international references in the conservation, rehabilitation and promotion of this type of architectural heritage. Therefore, a RehabiMed project has been initiated to document, preserve and develop these sites, many of which are under threat. With a holistic and interdisciplinary vision, the related areas will be studied in detail from historical, geographical, typological, social and ethnological perspectives, and considering their bioclimatic values. The Project wants to highlight this unique heritage, present throughout the Mediterranean basin, establishing a comparison between the different typologies, characteristics and situations, which are really very varied, extending a vision to the rest of the world. An aspect to highlight is the bioclimatic values of this type of natural habitat, as well as analysing the limitations it may present in aspects such as ventilation or natural lighting. We should be able to make a first Inventory of Troglodytic Heritage, with updated and accurate information on this heritage resource.

Another purpose of the Project is to define strategies and instruments for the sustainable revitalization of this heritage, preventing it from falling into neglect or being overexploited for tourist purposes, of both cases we can see real examples. It would be necessary to propose a local utilization oriented towards social profitability and sustainability, while incorporating the demands of contemporary life or simply valuing it as a heritage asset.

Methodology

The Project is promoted by the RehabiMed Association with the collaboration of the Technical University of Catalonia and the University of Cagliari. DICAAR. Italy, with the main support of ICOMOS, Institut Europeu de la Mediterrània (IEMed), Union for Mediterranean (UfM) and many Mediterranean universities and local entities.

The work to be done is essentially: Documentary and bibliographic research of troglodyte settlements in the Mediterranean; Documentation of the selected sites; Inventory of this type of architecture in the Mediterranean; Study and analysis of real experiences in the preservation and revitalization, and a final monographic document of conclusions and recommendations.

The development of the Project is structured in several related research vectors that represent the variables that support the design of this architectural and heritage model. The analysis will take place at four scales:

- Global issues
 - ✓ Troglodyte settlements in the Mediterranean
 - ✓ Documentary and bibliographic study
 - ✓ Archaeology and History of the area
 - ✓ Population and demographic evolution
 - ✓ Tangible and intangible heritage
 - ✓ Awareness and public engagement
- Territorial analysis
 - ✓ Natural environment and landscape
 - ✓ Geology of the place
 - ✓ Territory and environment. Fauna, flora, ethnobotany, use of natural resources
- Site and buildings study
 - ✓ Graphic survey of the sites and surroundings
 - ✓ Urban structure of the settlements and accessibility
 - ✓ Constructive characteristics of the built elements
 - ✓ Construction techniques and materials
 - ✓ Constructive and structural diagnosis
 - ✓ Components of bioclimatic architectural, behaviour and utilization
 - ✓ Ethnological aspects related to the traditional way of life
- Proposals for the future
 - ✓ Guidelines for the preservation and promotion of this architecture.
 - ✓ Recovery models related to housing or tourism.
 - ✓ Future prospects of these settlements

Espluga de Cuberes case study (Gerri de la Sal, Catalonia, Spain)

Espluga de Cuberes is a farm built taking advantage of a large concavity in a cliff placed on the UNESCO Origins Geopark, with several houses and a Romanesque church (XI century).

The International Workshop Espluga de Cuberes. *"Living on the cliff. Analysis of the troglodyte habitat and rural depopulation in the Mediterranean"*, organised by RehabiMed from 25 August to 7 September 2024, is a case study and starting point of the Project, with the participation of 30 professionals and experts from Morocco, Algeria, Tunisia, Palestine, Lebanon, Türkiye, Italy, France and Spain.

Currently, RehabiMed, with the Polytechnic University of Catalonia and ICOMOS-Spain, are working in their studio with university professors and local experts, from a landscape, architectural, historical and ethnographic perspective, to document the existing elements in the site and its natural surroundings. Future strategies will be proposed to preserve and revitalize these unique places, throughout the Mediterranean area.