

Between Oblivion and Regeneration. A Map of Abandoned Spontaneous Architecture in the Abruzzo Inner Areas (Italy)

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Abstract

Vernacular architecture reflects the relationship between a community and its territory, embodying local traditions and knowledge. It has developed through empirical knowledge, adapting to morphology, resources, climate and socio-economic needs. In many areas, the prevailing rural economy favoured the spread of buildings functional to the management of the territory. This type of architecture is widespread in inner areas of Italy, which face significant challenges related to the marginalisation and demographic decline phenomena. Starting from this premise, the contribution presents a preliminary analysis for mapping the spontaneous architecture in the Abruzzo inner areas, by identifying and cataloguing artefacts that define the built landscape of this territory. This architectural heritage represents evidence of the local building traditions that have developed over the centuries in relation to available resources, climatic conditions and the social needs of the communities. To systematize and make accessible the collected information, a central role has been assigned to digitisation processes through the definition of a digital catalogue integrated with consolidated GIS methodologies for data management and results analysis. The study aims to build a scientific knowledge base of vernacular architectural typologies, which may represent the basis for new insights for developing future hypotheses for the reuse and regeneration of rural architecture in an innovative and sustainable key.

Keywords: Inner Areas; rural architecture; mapping of spontaneous architecture; regeneration of abandoned heritage; ruin

1. Introduction

The Italy's inner areas are characterised by the presence of a differentiated architectural heritage that is distinguished by its peculiarities and features. Particularly relevant is the vernacular architecture of rural areas, i.e. those utilitarian artefacts of a spontaneous nature that represent

evidence of the relationship between local communities and their territory (Rudofsky, 1966)

Due to the issues affecting inner areas, such as the marginalisation that, since the middle of the last century, has favoured demographic decline and depopulation of territories, abandonment phenomena have emerged, causing the

deterioration of much of the vernacular architecture. In line with the National Strategy for Inner Areas (Formez PA, 2022), which identifies cultural heritage as a driving force for the economic and social recovery of marginal territories, and the Charter on the Built Vernacular Heritage (ICOMOS, 1999), it is important to implement actions aimed at the knowledge and documentation of the spontaneous architectural heritage to ensure its preservation over time and its enhancement.

Previous studies, at a national (Pagano & Daniel, 1936; Gambi & Barbieri, 1970; Castellano, 1986; Alessandrini & De Concini, 1995) and international level (Blaser, 1976; AA.VV., 1961; Oliver, 2007; Mileto et al., 2015), have contributed to expanding knowledge through typological analyses, laying the foundations for the systematic cataloguing of rural and spontaneous architecture.

The importance of documenting vernacular and rural architectural heritage, as a preliminary action for identifying appropriate conservation and valorisation protocols, is recognized, at the national level, by the activities of the Institute for Catalogue and Documentation (ICCD). The Institute has implemented cataloguing forms to document single objects of movable heritage, archaeological contexts, urban and territorial assets, as well as architectural and demo-anthropological heritage. Recently, within the framework of the National Recovery and Resilience Plan - PNRR, the Rural Architecture - AR form (ICCD, 2025) was developed to describe and document the different types of artefacts found in rural contexts. This form provides for the compilation of different fields, ranging from data concerning the landscape to that of the area's hazard, from architectural analysis to historical data.

This contribution fits into this context and presents the results of a preliminary analysis aimed at mapping the vernacular architecture of Abruzzo's inner areas, combining traditional

approaches for thematic analysis with digital technologies for data documentation and management. These knowledge actions support the development of innovative and sustainable strategies for the conservation of abandoned spontaneous architecture.

2. Vernacular architecture in Abruzzo

Vernacular architecture in Abruzzo emerged to meet specific social needs mainly related to daily life, synthesising cultural values and local traditions. This architecture is influenced not only by the orographic characteristics of the Abruzzi territory, which is reflected in the choice of materials and construction techniques, but also by the different economic and labour vocations of territories.

Therefore, vernacular artefacts, which differ according to the region's diverse landscape characterised by sea, hills and mountain peaks, can be ascribed to different functions, such as fishing, sheep farming and agricultural production. This has led to the development on the Abruzzo coast, particularly between Ortona and Vasto, of special fishing architecture called *Trabocchi*, real wooden stilts immersed in the Adriatic Sea (Serafini & Di Toro, 2021) (Fig. 1a). To meet the needs of pastoralism in the Apennine mountains, several dry-stone huts were built and used as shelters by shepherds (Redi & Di Blasio, 2010; Micati, 2016) (Fig. 1b).

The most emblematic expression of vernacular architecture is the residential building, which differs in typological schemes and construction materials according to the geological and orographical characteristics of the territory (Varagnoli, 2003). Mario Ortolani, in his work on the rural house (1961), distinguishes two main models: the slope house (*casa di pendio*), which develops vertically and is more common in mountainous areas, and the valley house (*casa di fondovalle*), which develops horizontally and is more widespread in valley areas, extending to the Adriatic coast.



Fig. 1 – (a) Photos of: Trabocco “Punta delle Morge”, Chieti (Pixabay, Bueno del tesoro, 13 June 2020); (b) Dry-stone huts in Val Maone, Teramo (courtesy by Giuseppe di Bonaventura).

In addition, the study proposes the distinction into several regional and local types: external staircase type, slope type with a superimposed dwelling, slope type with juxtaposed elements, tower type, Marsica earthquake-resistant type, and coastal gardens type (Fig. 2).

A further classification of vernacular architecture in Abruzzo can be made based on materials and construction techniques. A macroscopic classification distinguishes limestone artefacts in the inner Abruzzo region of L'Aquila, sandstone in the Teramo side of the Gran Sasso (Zordan et

al., 2002), and brick houses, also employing the use of rammed earth, mainly in the coastal area (Serafini, 2003). The classification of vernacular architecture derived from existing studies can also be interpreted in relation to the geographical distribution with architectural typologies occurring in inner areas. Based on this assumption, the study proposes to analyse vernacular architecture in a rural context within one of Abruzzo's inner areas (Formez PA, 2022), the Gran Sasso-Valle Subequana located in the province of L'Aquila (Fig. 3).

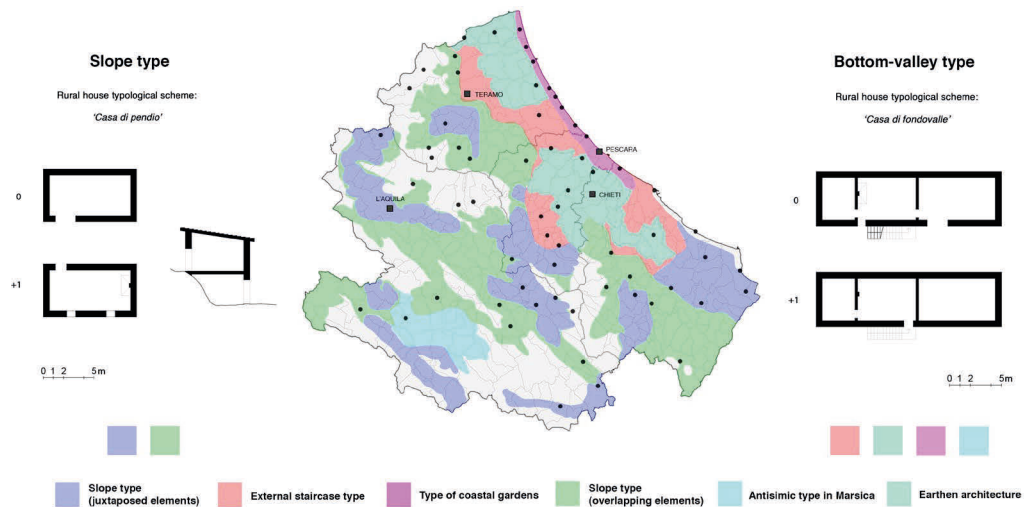


Fig. 2 – Map of rural house types in Abruzzo (re-elaborated by authors from Ortolani, 1961).



Fig. 3 – The map of Abruzzo inner areas with the selected pilot area highlighted in black (Authors, 2025).

3. Materials and methods

The inner area identified as the pilot area (Fig. 3) extends between two imposing mountain massifs, the Gran Sasso to the south-east and the Sirente-Velino to the north-east and is characterised by highland centres and valley-floor settlements that represent the identity of the regional built landscape. The architecture of this area can be analysed in relation to both geomorphological aspects, which have influenced the settlement typologies and the material choices, and to the specific issues faced by inner areas, which have conditioned its use and conservation strategies with the consequent abandonment of many artefacts.

To achieve the research objectives, namely mapping vernacular architecture in the pilot area to increase its knowledge, established methods of analysis and cataloguing have been used for the single artefacts that define the built landscape of this territory. Cataloguing plays a crucial role in documenting the historical built heritage as it enables in-depth knowledge of the typological and formal aspects of heterogeneous assets to be protected and enhanced. In this context, aimed at increasing knowledge through the compilation of specific forms (D'Amore, 2020; Lidón de Mígel

et al., 2020) and the development of shared and closed vocabularies that facilitate compilation and ensure standardisation of data (ICCD, 2025), are also significant.

Based on this standard, an expeditious census form for vernacular architecture has been developed, retrieving the main fields of the AR form and integrating them with those derived from the immovable assets forms.

To facilitate the acquisition phase, systematise information and ensure its accessibility, a central role was assigned to digitisation processes. In this regard, the expedition form has been digitised and integrated into a digital catalogue. This catalogue is distinguished by its ability to integrate data, thanks to unique identification code, with specific information from different subject areas, drawing on additional forms developed by the research group (Marra & Fabbrocino, 2020; 2021; Savini et al., 2021).

The catalogue has been integrated into a GIS environment (Accardo, Cacace & Rinaldi, 2005; Acierno & Fiorani, 2019) for a cross-referencing of the data to facilitate the analysis of the results by correlating the artefacts with the territory.

4. Results

The cataloguing of vernacular architecture in the rural context of the Gran Sasso-Valle Subequana inner area helped to validate the potential of the digital catalogue defined.

The first section of the catalogue contains, in addition to the unique identification code (*ID*), general information on the geographical and territorial location of the artefact. The second part of the catalogue contains data that allow for a detailed analysis of the artefact and its specific components, also supported by visual elements such as images and preparatory sketches. Particular attention has been given to the *Category* field, which, thanks to predefined values, classifies the architecture into three systems, as defined in the AR form.

Specifically, the entries in this field distinguish between: *Single building*, for isolated structures; *Building with outbuildings*, for those consisting of a residential unit and one or more architecturally separate service elements; *Complex*, for groups of multiple elements considered as an organic unit. In the same section is the *Specification* field that allows for recording information on the typological characteristics of the census asset (e.g. *dwelling*, *stable*, *storage*, *warehouse*, *workshop*). The *Typology* field

allows for a more detailed classification of the identified typology based on the intended use, specifying the type of dwelling and the characteristics of the outbuildings (e.g. house with overlapping elements, temporary shelter, mill, etc.). Finally, since the typological definition of the property may differ according to the dialectal term used at the regional and local level, the field *Local Denomination* has been included to report the specific name adopted in the reference area.

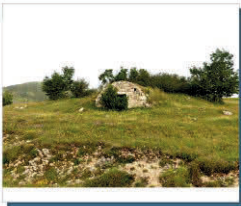
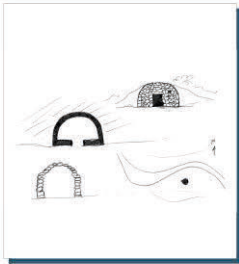
Scheda censimento Architettura Vernacolare			
ID	AR_0003	FOTO	
REGIONE	ABRUZZO		
PROVINCIA	L'AQUILA		
COMUNE	L'AQUILA		
SISTEMA DI RIFERIMENTO	WGS84		
COORDINATE	42.405061, 13.548975		
DESCRIZIONE MANUFATTO			
EIDOTIPO	CATEGORIA	SPECIFICHE	
	Edificio Singolo	ABITAZIONE	
	TIPOLOGIA	DENOMINAZIONE LOCALE	
	RICOVERO TEMPORANEO	THOLOS	
	ID-MULINO	Scheda Mulini	
FORMA IN PIANTA	N LIVELLI	DESCRIZIONE DELLO SPAZIO	
SEMICIRCOLARE	1	Spazio unico, di forma semicircolare, di dimensioni ridotte	
Descrizione Elementi Caratteristici			
ID-MURATURE	MATERIALE MURATURE	Pietra calcarea	
Scheda Muratura	TECNICA COSTRUTTIVA E TIPOLOGIA	Muratura a secco	
STATO DI CONSERVAZIONE GENERALE			
RUDERE			

Fig. 4 – Example of a census sheet of vernacular architecture compiled for a temporary shelter (Tholos) on the Gran Sasso (Authors, 2025).

Most of the vernacular architecture in the investigated area refers to the dwellings, which, however, differ significantly according to their location. A notable example is the case of temporary shelters found on the heights of the L'Aquila territory. Among these, the huts used as shelters for shepherds (Fig. 4) are particularly characteristic and are known by different local names, such as *Tholos*, *Locce*, and *Condole*. Some structures with workshop functions have also been surveyed, and their specific function has been recorded in the typology field. Very representative in the Aterno River valley are the mills for which it is possible to implement additional information in a special Mill Form. This form interfaces with the catalogue through the unique identification code *ID-Mill*.

The following fields allow for defining the state of conservation of the artefact and describing it from a spatial and volumetric point of view, thus providing information on the geometric characteristics of the analysed asset that can support future survey campaigns. Some sections of the catalogue concern the characteristics of the masonry for which the materials used, and the construction techniques found can be specified.

The description of the masonry is further detailed in the Masonry Form, which interfaces with the catalogue through the unique identification code *ID-Masonry*. A further field allows the census of architectural elements by defining the type and describing the element. Also in this case, through the *ID-Architectural Element*, it is possible to link the data to those contained in a further form, providing detailed information on each single element.

Finally, the last section of the form includes fields that can only be completed after an in-depth analysis of the structure and its surrounding context. This section gathers information on the history, chronology and evolution of the asset's use, both in the past and present, which may not always be available at the moment of compilation.

The first phase of the census was conducted remotely using the cartographic material available on the Geoportal of the Abruzzo Region. Thanks to the raster layers representing the territory in the form of high-resolution orthomosaics and the digital terrain model obtained through LiDAR, the territorial features in the rural context were analysed. Furthermore, the overlapping with the Regional Technical Map and the one produced by the Military Geographical Institute (IGM) enabled the identification of some isolated artefacts that could fall within the typologies of vernacular architecture. This prompted field analyses for the census of these artefacts through the compilation of the implemented form.

Subsequently, the data collected in the field were linked to the geometric entities created in GIS for each artefact using the Join command, which allows the data collected in the digital catalogue to be related by ID (Fig. 5).

The data analysis in the GIS environment favours a diversified reading according to the information contained in the catalogue. Particularly interesting is the visualisation of vernacular architecture in a state of abandonment. This tool, in addition to increasing knowledge of the architectural heritage, can facilitate the definition of operational strategies by citizens and administrators.

5. Conclusions

The study, which represents an in-depth analysis within a broader research project conducted by the research team on the built heritage of the inner areas of the central Apennines, has allowed for initiating the process of documenting architectural typologies, which, although still at a preliminary phase, represents a crucial step toward understanding vernacular architecture in the Gran Sasso-Valle Subequana inner area.

The results highlight the widespread presence of artefacts belonging to utilitarian vernacular architecture, an expression of the practical needs of communities in the past in relation to both

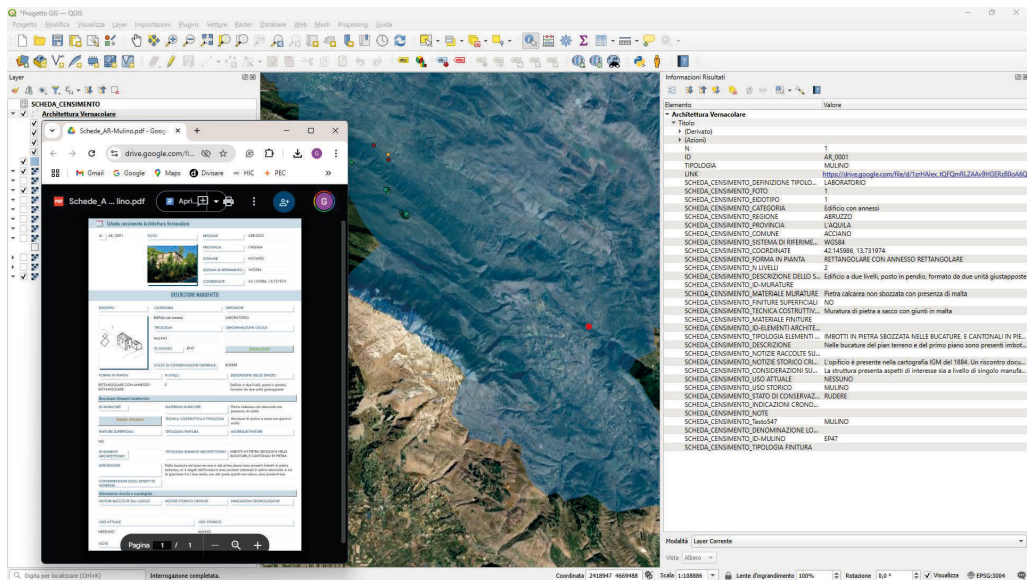


Fig. 5 – Data integration and visualization in GIS project (Authors, 2025).

living and working activities. Many structures are closely connected to the agro-pastoral context, serving as refuge for people and animals, thus contributing to the economic and social development of the territory.

The diversified interpretation of the data also allowed the mapping of abandoned vernacular architecture. The map is a potentially useful tool for the conservation of artefacts and historical memory.

Indeed, the digital analysis of the data would improve the management of abandoned vernacular architectural heritage, also in relation to the instability and multi-hazard phenomena that affect inner areas.

The promising results demonstrate how this work can provide the basis for the development of future recovery, reuse and regeneration hypotheses for vernacular architecture in an innovative and sustainable manner.

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