

Original article

Methodological bases for documenting and reusing vernacular farm architecture

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Abstract

For the last decades, many traditional farm buildings have lost their original function because of the great changes in the European agricultural sector. The respectful conversion of these derelict constructions to adopt new economic or social uses constitutes an interesting practise to protect the rural landscapes and to set in motion complementary gainful activities to the agricultural production. The starting of a regional or local scheme to protect the built heritage in a particular rural area requires an appropriate knowledge of construction techniques and typological characteristics of the traditional architecture. According to the practical experience of the author in Central Spain, this paper deals with the proposal of methodological bases for data collection and subsequent analysis of the vernacular constructions in a particular rural area. The systematic assessment of the suitability for reuse of old agricultural buildings by multicriteria decision-making techniques to ensure the preservation of the most valuable examples is also discussed.

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1. Introduction

Traditional farm buildings play an important role in rural landscapes. The specific techniques, materials and building details used in each particular rural area turn its vernacular architecture into an identity symbol and rich ethnographic evidence about rural technologies and ways of life in the countryside [1–3].

For the last 50 years, important changes have taken place in the European rural areas. The mechanization of agricultural works, the increasing depopulation of rural districts and the fall in the number of agricultural holdings have resulted in the loss of traditions and the dereliction of many vernacular buildings which are no longer useful for their original function. This phenomenon is a common feature in rural districts of most European countries, such as Belgium [4], Denmark [5], France [6], Italy [7], the Netherlands [8], the United Kingdom [9,10] or Sweden [11], among others.

At the same time, a great increase in demand for countryside goods and services, such as recreational activities, contemplation of the landscape, marketing of traditional products or cultural tourism, has taken place for the second half of the 20th Century. The promotion and economic use of these resources offer a practical opportunity for the diversification and improvement of the rural economies [12].

In that context, the European Union's current rural development policies consider the preservation of the vernacular architecture as a priority objective. In Spain, it can be estimated that more than 400 million of Euros were allocated by the EU LEADER and PRODER programmes to preserve and maintain the countryside cultural heritage for the period 1991–2000 [13]. An important part of these funds were devoted to convert old vernacular constructions into rural tourism establishments. The number of rural houses for rent to tourists in Spain increased from just over 1000 in 1993 to 11,839 at present [14]. Moreover, legislation to protect prominent buildings and sites has been passed for the last years in nearly all European countries. In Spain, regional laws on cultural heritage promote the preservation of buildings and areas of historic, architectural or ethnological value as “Places of Cultural Interest” or “BIC”.

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The reuse of redundant buildings to accommodate alternative new activities compatible with their character represents an appropriate and long-term sustainable preservation option, as it provides a utility for the owners, guarantees the proper maintenance of the estates and helps to protect the sense of place of rural landscapes [15,16]. The starting of a local scheme to protect the vernacular architecture in a particular rural area requires an appropriate knowledge of the traditional building techniques and typological characteristics of the existing built heritage. The establishment of selective criteria to guarantee the preservation of the most valuable and significant specimens is needed due to the high number of traditional redundant buildings usually found.

This paper aims to contribute to literature with the proposal of methodological principles to systematically face up to the reuse of traditional farm buildings at a local or regional context. The following pages provide a review of some techniques that can be used for data collection and typological analysis of the built heritage and guidance in assessing the reuse potential of traditional farm buildings. The proposed model has been tested and put into practice in a rural area of Central Spain [17].

2. Methodological approach for documenting and reusing vernacular farm buildings in rural areas

Several thousands of traditional farm buildings can be found in any European region. As an example, a recent research promoted by English Heritage and The Countryside Agency estimated in more than 1.2 million the existing pre-1914 historic farm buildings in England [10]. The large number of constructions in the countryside makes unfeasible a detailed study and a singular action on each particular sample. A systematic previous work of detection, typological analysis and selection of the most significant buildings is therefore required.

Vernacular architecture is strongly influenced by the landscape, the climatic conditions and the available natural resources [18]. All these topics should be carefully studied at a preliminary stage before dealing with the analysis and typological classification of the traditional rural architecture. Research on the socioeconomic situation of the studied area is also necessary to become aware of the real interests and problems of the rural population and to suggest feasible reuse alternatives [19]. In-depth interviews or more informal chats with local residents and particularly with rural development agents, town councils and other local bodies are useful resources to obtain information.

Fig. 1 proposes a method to deal with the study of the vernacular architecture in a rural area and the subsequent reuse of interesting vacant buildings in six successive steps.

2.1. Phase 1: Preliminary studies

A preliminary analysis of the area must be carried out before facing the study of the vernacular architecture. Basic demographic figures and socioeconomic indicators are easily accessible from the National or Regional Statistical Offices. More specific social or economic studies are sometimes published by town councils or other local institutions. A compilation

of building regulations and land-use ordinances is also necessary to know legal restrictions when a reuse scheme is intended.

Traditional building materials and techniques used in a particular area are very important topics to study. These specific issues are closely linked to the local available natural resources. Geological maps, soil surveys, crop maps and natural resources inventories are helpful tools to explain the pattern of use of certain walling and roofing materials and structural systems. Classical architectural treatises [20,21] and more recent literature [22–25] also provide useful information about vernacular construction materials and techniques. Video recording of the way to carry out these traditional tasks by local builders is a practical way to document nearly forgotten native practices and to promote their use when an old vernacular building is reused.

Historical background helps to date the buildings and to understand the evolution of the vernacular architecture in a particular rural area. Traditional buildings are very influenced by the chronology of the development of infrastructures in the area where they are sited. Until the late 19th Century, most of the Spanish countryside areas were agriculturally based, self-contained communities. Vernacular architecture was almost exclusively based on available local materials and labours. The arrival of railways allowed an easier transport of building materials and the introduction into the countryside of urban technologies such as electricity and steam engines. New agro-industrial premises (flour factories, wineries, olive oil factories and others) were built in the rural areas using new construction techniques and mass-produced materials, such as ceramic bricks, cement or steel, subsequently exported to the vernacular architecture [26]. It helps to explain, for instance, why certain alien materials appear in a particular area but not in others.

2.2. Phase 2: Making an inventory of traditional farm buildings

The main objective of the inventory phase is to identify the existing traditional farm buildings in the study area and to locate them by geographical or UTM coordinates. In addition, basic data about the buildings, such as the original and current use, structural condition, plan and roof configurations, materials, construction techniques or building details, must be compiled to recognize the existing building types and to select the most significant examples belonging to each of them.

Documentary sources are helpful resources to minimize field-work due to the large number of constructions to be considered. In Spain, different written and graphical resources can be used for an introductory analysis of the traditional rural architecture at a regional or municipal level.

Literature on Spanish vernacular architecture dating from 1930 to 1980 provides a general analysis of traditional rural dwellings at a national level [27–29,18]. Nevertheless, a very large number of regional and local studies have been published for the last three decades. Many of these references are partly or entirely focused on non-residential farm buildings, such as traditional wine cellars [30], dovecotes [31], water mills [32] or beekeeping structures [33], among others.

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