

COL-LABORAxPAISATGE: Rural Development Through the Landscape and Public Collaboration

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Abstract: Our dry-stone heritage, trade and building technique are handicapped by a systemic problem that is causing this knowledge and practice to practically disappear. Paradoxically, dry-stone structures are numerous in Catalonia, especially in the countryside, while also forming part of road infrastructures, some of them built on dry-stone banks and bridges. The loss of the technique, along with the abandonment of these structures, has led to an inability to maintain and restore them. At the same time, it's also a technique that has proven to be useful in overcoming the challenges facing contemporary architecture, in keeping with the SDGs defined by the United Nations and contained in the 2030 Agenda, and it was included on *UNESCO's Intangible Cultural Heritage List* in 2018. Through multiple lines of work, the COL-LABORAxPAISATGE project contributes to the enhancement of this heritage, trade and technique as a means for the development of rural areas.

Key words: dry stone, rural development, heritage, landscape, construction, traditional trades, public collaboration, new technologies, UNESCO

1. Introduction

“Dry stone is defined as the technique used in any construction that does not use lime or any other type of cohesive material. In other words, the basic element, in this case the stone, is placed in rows stacked on top of each other without any material cementing them together” [1].

Although the dry-stone technique has been used since prehistory, its golden age in Catalonia went from the end of the 18th century to the end of the 19th century, a period which most of the buildings that still stand today date from. The emergence of dry-stone constructions at this time coincides with a sharp increase in the population and is the result of changes in land ownership systems, which is why they occupy virtually all the land and wooded areas that had, until then, remained uncultivated [2].

Today, these dry-stone constructions have both great historical and aesthetic value, and are a true identifying feature in many territories where they are a common feature. Cottages, boundaries, walls, ovens, waterwheels, vats, cattle routes, bridges, wells... a very important rural heritage that has shaped the highly valued agricultural and livestock landscapes over the years and in which olive groves, vineyards, almond trees and cereal crops predominate, fully adapted to the soil and climate. As for the dry-stone walls, in addition to forming terraces and boundaries between plots of land, they constitute rich ecosystems for a wide range of animal species (insects and invertebrates, amphibians, reptiles, small mammals and some species of birds that nest in them) and plants (ferns, lichens and mosses).

2. Context: Dry Stone in Catalonia

Despite the many valuable aspects of dry-stone heritage (ecological, aesthetic, historical and identity), they are in a decline caused mainly by the progressive

abandonment of agricultural and livestock activity. This means that the heritage has deteriorated, has been destroyed or is hidden and erodes away inside the forest areas that had previously been cultivated. This is

confirmed when we observe that more than half of the dry-stone cottages inventoried in Wikipedra [3] are found in forested areas that had once been cultivated.



Fig. 1 Dry-stone cottage in Garriga d'Empordà (Alt Empordà, Catalonia). Photo: Silvia Vidal (ADRINOC).

Unfortunately, this abandonment coincides with the disappearance of the dry-stone wall maker's trade and the loss of knowledge of this building technique mainly because it is no longer passed down from one generation to another and the lack of regulated training in our country. However, in Catalonia, associations and volunteers have been striving to maintain, restore and disseminate this heritage and this technique for many years, which has proved effective in responding to the challenges of contemporary architecture and which is in line with the Nature-Based Solutions (NBS) defined by the European Commission [4].

The value of this heritage asset must be achieved through the general recognition of dry-stone constructions. The heritage of dry stone is inseparable from the society it coexists with. The involvement of society in the knowledge, management and preservation of this heritage must make it possible to develop tools and activities that generate a benefit for the heritage along with economic activity on the ground.

2.1 Inventory and Protection

In recent years, there has been growing interest in this type of construction, evidence of which includes, among other initiatives, some of the most unique elements of dry-stone constructions in Catalonia, promoted by numerous town and county councils throughout the region, having been declared Cultural Assets of Local Importance (BCIL in its Catalan initials) and Cultural Assets of National Importance (BCIN in its Spanish initials). This culminated in the declaration of the art of dry-stone walling knowledge and construction technique as an Intangible Cultural Heritage of Humanity by UNESCO [5] on 28 November 2018 as a result of the joint candidacy of eight European states: Cyprus, Greece, Croatia, Slovenia, Switzerland, Italy, France and Spain.

In Wikipedra, the online inventory of dry-stone constructions managed by the Landscape Observatory of Catalonia, there are currently 27,305 dry-stone constructions catalogued, and this figure is growing every day (Fig. 2).

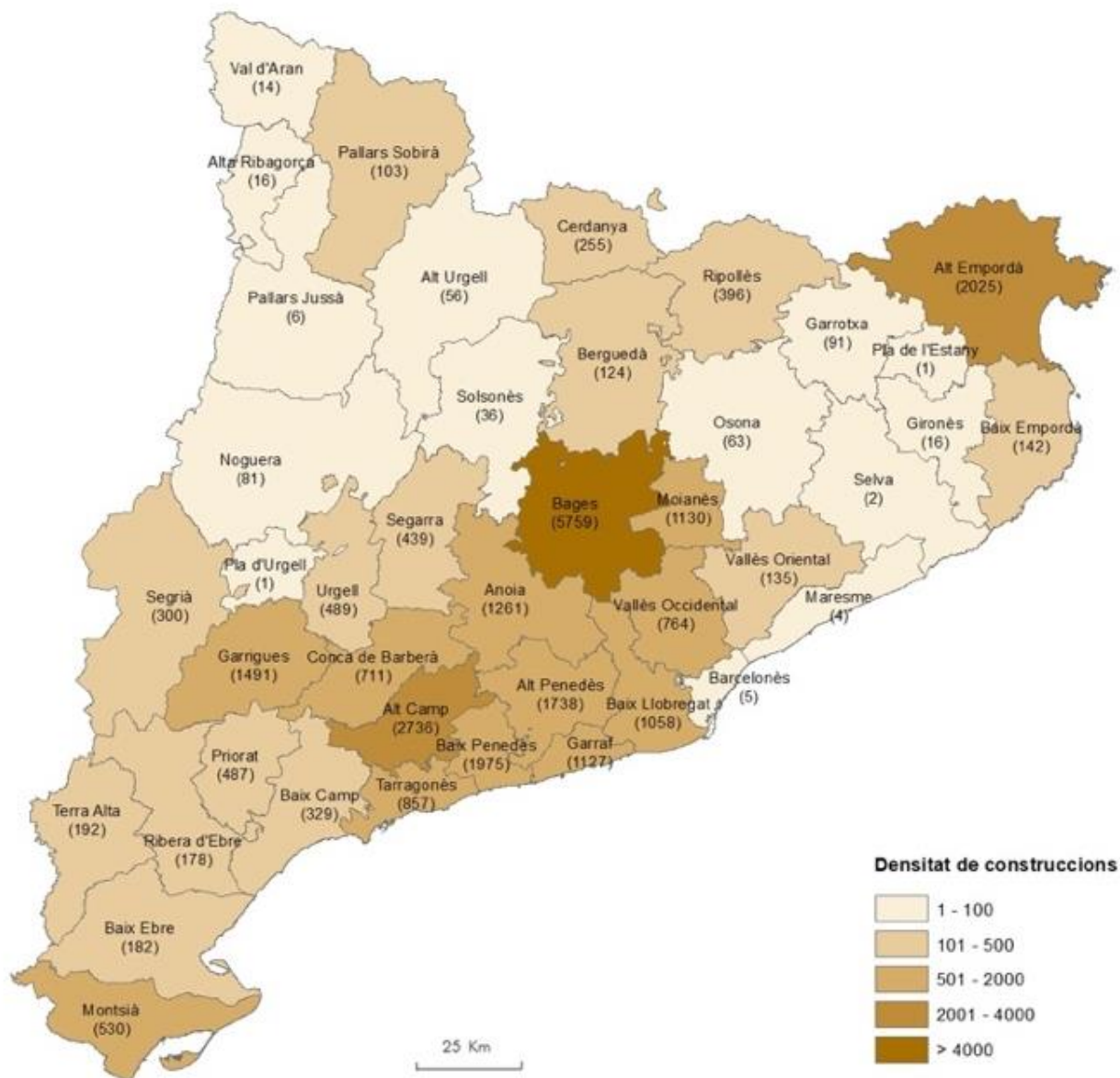


Fig. 2 Map of dry-stone constructions in Catalonia catalogued in Wikipedia.

Source: Landscape Observatory of Catalonia, Wikipedia, June 2021

3. The Project: COL·LABORAxPAISATGE

In this context, in 2016, ADRINOC, the *Associació per al Desenvolupament Rural Integral de la Zona Nord-Oriental de Catalunya* (Association for the Integral Rural Development of the North-Eastern Area of Catalonia) promotes the Leader collaboration project COL·LABORAxPAISATGE: “Rural development through the landscape and public collaboration (dry-stone constructions)” with the

advice and technical support of the Landscape Observatory of Catalonia, aimed towards the creation of rural development through elements that shape our landscape (dry-stone constructions) whilst providing tools and resources to the general public who will collaborate in promoting economic activity.

Economic and social development is key to the maintenance of rural areas, and must be based on the idiosyncrasy of each territory, its peculiarities and its heritage. At the same time, in order for this

development to become sustainable, civil society and the general public must be involved [6].

3.1 Objectives and Lines of Work

Based on the analysis of the sector and the dialogue with agents and associations, COL·LABORAxPAISATGE defines the highlighting of the value of dry-stone constructions and their landscape as a way of promoting rural development with public collaboration and civil society as a strategic objective of the project. This will be done through:

- The creation of tools to facilitate access to dry-stone constructions.
- The dissemination and highlighting the value of dry-stone heritage.
- The dissemination of the dry-stone construction technique and the economic opportunities (training/employment) this generates for rural areas.
- Encouraging dialogue and inter-cooperation between civil society and the government to take on joint projects in relation to the landscape and/or dry-stone constructions.
- Communicating and highlighting the value of the landscape as a revitalising force in rural areas.

Since its creation, COL·LABORAxPAISATGE has carried out cross-disciplinary activities to highlight the

value, disseminate and increase knowledge about dry-stone constructions based on various lines of work, thus contributing to raising the visibility of this heritage, trade and construction technique and the consolidation of the dry-stone sector in Catalonia.

3.2 Main Actions

In the early years, the actions of the project were directed mainly to the creation of necessary tools for the consultation and cataloguing of the dry-stone heritage found in Catalonia. Among the various actions carried out, the creation of a filing system to ensure unified cataloguing of the various constructive typologies found in dry-stone constructions (cottages, walls, ovens, water constructions and others), the creation of the *Pedra Seca* (Dry Stone) App [7], a collaborative application connected to Wikipedra that allows users to look up and catalogue dry-stone constructions in Catalonia and part of the French territory in situ, using their mobile phone; the app has had more than 2,500 downloads; and the publication of: “Paisatge, desenvolupament rural i ciutadania. Bones pràctiques de col·laboració ciutadana en la gestió del paisatge a Europa”. (Landscape, rural development and citizenship. Good public collaboration practices in landscape management in Europe) [8].



Fig. 3 Cross-border conferences on dry-stone constructions (Figueres, 2028). Photo: Maite Oliva (ADRINOC).

In a second phase, the project focuses on the creation and dissemination of new tools and the organization of the sector and heritage, raising awareness of its value. Among others, the teaching and learning resource “*Tot un món de pedra seca*” (The world of dry-stone constructions) [9] a route guide providing knowledge of dry-stone resources for schools, institutes and other exhibition spaces; the publication “*La pedra seca com a motor de desenvolupament econòmic i social*” (Dry stone as a driver for economic and social development) [10], a collection based on 16 experiences from different sectors and dimensions, in Catalonia and beyond, which use dry-stone as a structural element or as a driver to generate economic or social development, some cross-border conferences [11], in which nearly 150 attendees helped to provide the sector with a narrative and build a portrait of the dry-stone construction situation in Catalonia and its potential as a driving force of rural and social economies; and the Register of the dry-stone construction trade in Catalonia, an open inventory which is able to determine and diagnose the state of the dry-stone construction profession, which currently has 107 people registered, of whom only 40% say they work as a professional dry-stone mason. Half of those registered also state that they form part of a related body or association [12].

In a third phase, COL·LABORAxPAISATGE has focused mainly on carrying out an important action coinciding with the anniversary of UNESCO’s declaration: with the promotion of the Setmana de la Pedra Seca (Dry-Stone Week), an event to organise and promote activities related to dry-stone constructions throughout Catalonia, involving both the public and private sectors, to raise visibility and highlight the important fabric of the bodies, groups and volunteers who provide the knowledge, dissemination and maintenance of dry-stone techniques. In its first event (November 2020), despite the difficult situation caused by the COVID-19 pandemic, Dry-Stone Week exceeded all expectations of participation, with more

than 90 planned activities and the participation of more than 100 entities and organizing groups, proving to be not just an encouraging initiative, but also one that was both useful and necessary for the sector.

At the same time, it has carried out actions such as video conferences including “*La pedra seca als Països Catalans: patrimoni, ofici, polítiques i reptes*” (Dry stone in Catalonia: heritage, trade, policies and challenges) with the aim of capturing the current state of public policies to promote dry-stone constructions in various territories as well as the trade of dry-stone wall makers in the 21st century [13], the edition of the publication “*Tècnica de construcció de murs en pedra seca. Regles professionals*” [14], (Dry-stone wall construction technique. Professional rules) the Catalan translation of the book with the same translated title, published in 2017 by the Artisans Bâtisseurs en Pierres Sèches (Dry-stone Artisan Builders Association — ABPS in its French initials) and the École Nationale des Travaux Publics de l’État (National School of Public Work - ENTPE in its French initials), leading book of the two regulated professional training qualification certificates in dry-stone construction (CQP in its French initials) offered in France, and the promotion of the line of research: “*Pedra seca i salut: aportacions a la reconstrucció del paisatge i el benestar*” (Dry-stone constructions and health: contributions to the reconstruction of the landscape and well-being) together with the CORE network on Mental Health of the Autonomous University of Barcelona, in order to evaluate whether active participation in dry-stone landscape reconstruction can help improve the health of the people who carry out this activity.

Similarly, throughout the project, they have organized training sessions and meetings, initiatives to encourage volunteering and networking with bodies and individuals in the region, regional impact actions and knowledge exchange trips, such as the Cross-border exchange trip and study in the Regional Natural Park of the Catalan Pyrenees (France, 2016) or the Knowledge acquisition trip to the École

Professionnelle de la Pierre Sèche de l'Espinàs (Cévennes National Park, France, 2019), among others.

3.3 A Network Project

COL·LABORAxPAISATGE has been created as a network project and has the collaboration of the Association for Dry Stone and Traditional Architecture (APSAT in its Catalan initials) and the participation of five Local Action Groups (LAGs) from all over Catalonia: Consorci Leader Desenvolupament Rural del Camp, the Consorci per al Desenvolupament del Baix Ebre i Montsià, the Associació Leader de Ponent, the Consorci Intercomarcal d'Iniciatives Socioeconòmiques Ribera d'Ebre — Terra Alta and the Associació pel Desenvolupament Rural de la Catalunya Central. The project also has a partner in Northern Catalonia (France), the Regional Natural Park of the Catalan Pyrenees, which manages the LAG *Terres Romanes en Pays Catalan*. COL·LABORAxPAISATGE is a project funded by the Department of Climate Action, Food and Rural Agenda of the Government of Catalonia within the framework of the Catalan Cooperation Grants between Local Action Groups and co-financed by the EAFRD.

4. Conclusions

Upon the basis of the results and assessments obtained from the different actions and lines of work, we can draw some overall conclusions regarding the promotion and consolidation of the dry-stone heritage, trade and technique in Catalonia, as well as the economic and social sector that has developed around it. The conclusions are divided into different thematic blocks and they complement the ideas that have been explored throughout the text.

4.1 Dry Stone as a Technique

The needs that the dry-stone technique have met have changed over time, shifting from the setting of life in the countryside to the aesthetic, historical, biological, educational, tourist, economic and cultural spheres. An

analysis of the real needs which this building technique currently meets has become key to the design of strategies geared towards its survival.

Interest in the dry-stone building technique has grown in recent years and amateur training related to building with this material has proliferated throughout the country. However, it's through the transfer of professionalism that its continuity can be guaranteed. In this regard, the declaration of this technique as Intangible Cultural Heritage by UNESCO may prove a turning point and open up a window of opportunity to address its consolidation and continuity.

In terms of its application to contemporary architecture, despite being competitive and effective for the realization of certain actions, the dry-stone technique suffers from a lack of knowledge and technical confidence that often hampers initiatives, which end up being completed with other materials such as concrete. It's essential to generate the validation mechanisms and technical documentation required to apply and certify it.

4.2 Dry Stone as a Trade

The traditional trade of a mason who works with dry stone has undergone a significant ageing process and, despite it providing a niche for public and private job and market opportunities, it isn't being passed on from one generation to the next. It requires a recognition and enhancement process that also involves the development of approved training to legitimise it. In this respect, the creation of the *Professional Dry Stone Construction Qualification* [15] by the National Institute for Qualifications (December 2020) opens the door to the creation of regulated training in Spain, but it's necessary to strive to ensure its implementation and consolidation throughout the territory.

Experiences such as those in Majorca and France, among others, testify to the potential of committing to the recovery and enhancement of this trade, as well as its capacity to generate an economy within its context.

4.3 Dry Stone as Heritage

In recent years, our dry-stone heritage has received highly positive responses from the academic world, society in general and those responsible for our collective heritage, which has meant that the identification, documentation and listing of numerous elements and, in some cases, their protection and restoration can be addressed.

But the sheer volume of dry-stone heritage that has survived to the present day is enormous, which means that without the help of voluntary labour and the support of the public administration agencies, it will not be possible to preserve a significant part of it in the long term. Given the impossibility of maintaining all this heritage, it is vital to draw up a national strategy for its global assessment, classification and rationalization, establishing clear criteria and determining what the focus for the efforts for its conservation should be.

4.4 Dry Stone as a Contemporary Resource

Today, the landscape forms a key part of local development strategies for sectors that have a direct relationship with it (such as tourism and wine growing) and others within the territory. Within this context, dry stone, not only as traditional architectural heritage but also as a backbone of the landscape, has become a strategic resource capable of increasing the value of proposals related to active and nature tourism, the deseasonalization and renewal of models, the sustainable development of rural areas and agricultural and local products, generating, in turn, an economic, social and environmental return.

Bodies and professionals devoted to heritage research and popularization, institutions that seek social and labour revitalization, companies in the tourism sector that base their strategies on heritage as a destination, accommodation or an experience, farmers and construction companies and professionals that apply the dry-stone technique to promote soil improvement, water regulation and the integration of natural areas into peri-urban areas and architects and

stonemasons specializing in the restoration of heritage all form part of a cross-sectional economic sector based on dry stone. But the sector's excessive atomization throughout the country has hindered its logistical articulation and organization, and each body and actor has to operate with the uniqueness of its region in mind. In this regard, it's essential to generate spaces for meetings and dialogue in order to build global strategies.

4.5 The Role of the Authorities

The various stakeholders in the dry-stone sector are united in demanding greater and more active participation by the authorities in the processes for the maintenance of our dry-stone heritage and the promotion and enhancement of the trade. This greater participation could chiefly be defined in the form of direct and indirect aid for the maintenance of the dry-stone heritage, active involvement in the establishment of approved training courses and the drawing up of technical reference documentation. To date, the participation of the authorities has mainly focused on research processes and heritage listing, as well as the restoration of Cultural Assets of National Interest (BCINs, in its initials in Catalan). Numerous dry-stone buildings in our country have also been listed as Cultural Assets of Local Interest (BCILs, in its initials in Catalan); this constitutes a first step of great significance, but it is crucial to provide this form of protection with a set of resources and policies that ensure that the responsibility for their maintenance and restoration doesn't fall solely on their owners or volunteers.

Lastly, to conclude, there is also a need to design a countrywide strategic framework for the future, clear and consensus-built guidelines for the restoration and maintenance of the dry stone-heritage, trade and technique.

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