

sous la direction de  
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# Villages et quartiers à risque d'abandon

*Stratégies pour la connaissance,  
la valorisation et la restauration*

TOME 1

  
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DEGLI STUDI  
FIRENZE

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Tunisie, village berbère de Zriba el-Alia (© L. Hadda)

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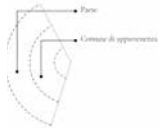
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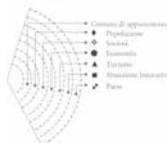
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Per complessare la parte di studio dei paesi abbandonati a Genova, si realizza un archivio detto in due colonne. In prima colonna delle quali riporta il nome del comune di appartenenza, mentre nella seconda il nome del paese abbandonato. Come si può leggere dallo schema, nella prima colonna di Genova si trova un totale di 43 paesi abbandonati. La maggior parte si localizza nella pianura di Riva, probabilmente dovuta alle difficoltà imposte dal passaggio rispetto al montagna. Segue Riva, per numero di paesi abbandonati. **Damigo Pirelli e Grassano e Albisola**

**Paesi con meno di 50 abitanti**



Per lo studio dei paesi con meno di 50 abitanti, si fa riferimento ai dati forniti dall'ISTAT, in particolare la tabella denominata comune, seguita dalle quali trovano indicazione, come una struttura: Popolazione, Società, Economia, Turismo, Situazione Insediativa. Parte del primo capitolo, in riferimento al comune, mentre l'ultima sezione si divide in 4 nuclei della popolazione nel caso nel quale è differente, per cui si comincia da il nucleo della popolazione (vedi prima sezione) e si procede

**Paesi proposti nello schema**

- Popolazione: Popolazione totale - Donne - Uomini
- Società: Società urbana - Elementari - Media - Abitativa - Centro di abito - Schiarita, centro
- Economia: Agricoltura (specie coltivati) - Sviluppo economico attività economica
- Turismo: Hotel - Chalet/Resort
- Situazione Insediativa: Presenza di abitazioni
- Paese: Nome del paese - Popolazione totale anni - Popolazione totale anni

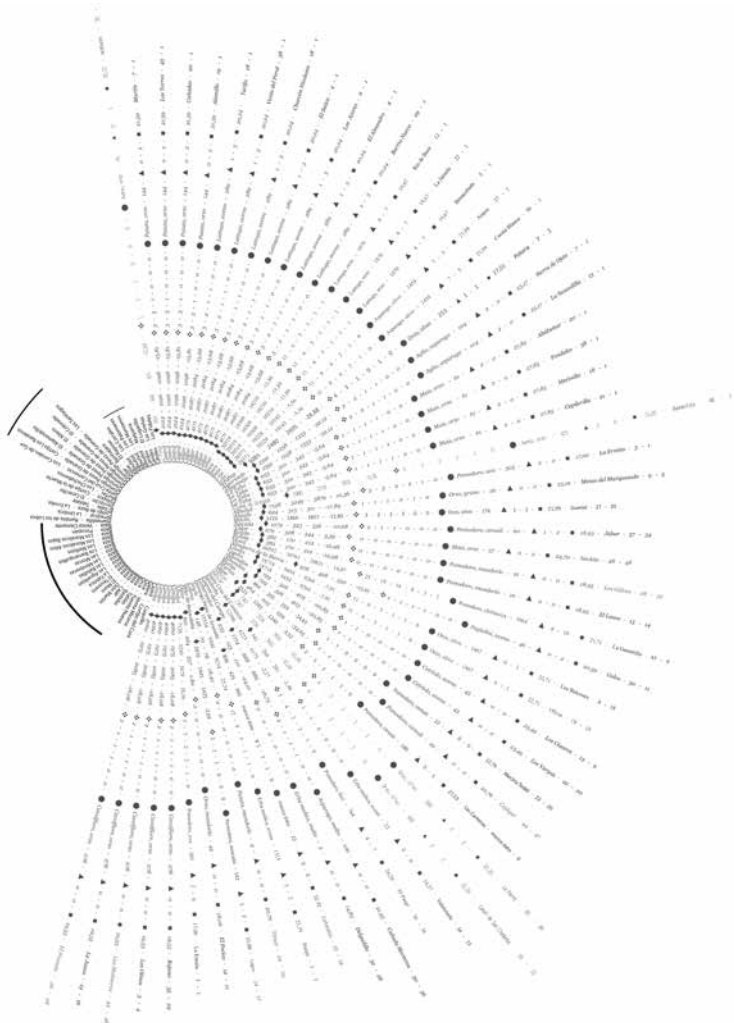
**Identificazione del grado di ruralità secondo i dati della tavola precedente**

- Ruralità profonda
- Ruralità transitoria
- Città

**Classificazione della crescita e decrescita della popolazione**

- Sullo scendere
- Sullo scendere
- Sullo scendere

Successo come nella maggior parte del caso, il numero di donne è minore di quello degli uomini, con l'eccezione della città, dove risulta il contrario. È importante la mancanza di centri di abitazione, di nuclei, oltre a attività locali come cinema e biblioteca. Le coltivazioni sono a dispersione, mentre Genova e Riva si analizzano come di alcuni nuclei più sparsi. La rete di abitazioni è molto sparsa e poco densa, proporzionale al numero di abitanti, quindi più dispersa, oltre nel paese più basso di la base, al contrario, sono presenti vicino al paese, più alta è la densità. Inoltre, occorre come nella maggior parte dei casi si è verificato un aumento del numero della popolazione nel paese con meno di 50 abitanti con una struttura che è quasi, in un territorio molto basso, dove sono stati abbandonati





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# ABANDONED VILLAGES IN THE AREA OF GRANADA. THE FORGOTTEN HERITAGE OF TABLATE

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**Infographic  
on mapped  
villages**  
Source: the  
authors from  
the INE data.

**Emma Verdelli, Giorgio Verdiani**  
Università degli Studi di Firenze-Italia

**José Antonio Benavides López**  
Universidad de Granada, España

Rural depopulation is becoming a problem day by day. There are a lot of reasons, which are leading to a massive exodus from the countryside to the city, but all of them are strictly connected to the change that we're carrying on from the economic and social points of view.

Depopulation is, first of all, a social issue, which is manifested by the abandonment of architectures, only one silent witness to the history of these places.

Firstly, this study wants to develop research, based on statistical data about Spanish and Andalusian situation, about the depopulation process of small villages; secondly, wish focus on mapping all of these entity dwells getting abandoned or yet abandoned in Granada's territory. Among these, an analysis is performed about Tablate, developing a survey of all the village and the most important building, a tower, as a witness of the cultural heritage, too often forgotten, in these places.

The main aim of this study is the heritage valorization of Tablate, whose history, and so whose architectural importance, it's completely unknown or fades into the background compared to others villages in the same area. Besides, it wants to encourage the requalification of abandoned villages, believing that the care and the reconstruction for the cultural heritage valorisation, in a durable and sustainable form, requires the restoration of historical buildings and, in the social field, an active population, aware of the heritage it has.

**Keywords:** España, Rural depopulation, Abandon, Rammed earth tower

## Rural depopulation

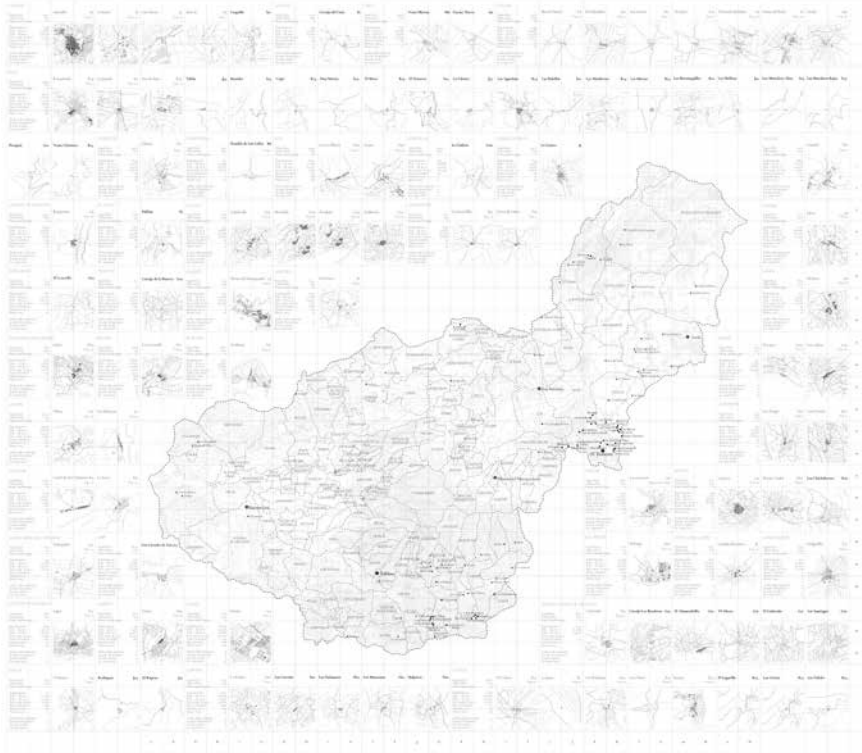
One of the greatest impactful process from a social and architectural point of view in Spain in XX century is rural depopulation, which is a controversial definition, as since a territorial aspect it's high to draw a line between rural and urban territory. Therefore, this study relies on the definition of rural, that we can give from a social point of view, and so as an urban entity with less than 10000 habitants<sup>1</sup>.

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<sup>1</sup> García Sanz, 2003, p. 17.



**Fig. 1**  
Catalogue and mapping of abandoned villages with less than 50 inhabitants in the province of Granada  
Source: the authors from the Base Cartográfica de Andalucía.



**Fig. 2**  
Example of catalogued villages: data and plans  
Source: the authors from the Base Cartográfica de Andalucía.

<i>CASTRIL</i>		Cañadas	J5 Pop. 20	Cuquillo	k5
Superficie	243,1				
Altitudine	895				
Num. nuclei pop.	17				
Popolazione	2236				
Pop. - di 20 a.	15,88%				
Pop. + di 65 a.	29,61%				
Incr. pop. in 10 a.	-13,37%				
Num. stranieri	126				
Nascite 2015	14				
Morti 2015	41				
Asilo nido-materna	3				
Scuole elementari	3				
Scuole medie	1				
Ist. superiori	0				

One of the main causes of depopulation was and continues to be, the exodus from the countryside to the city to follow economic and survival interests. There is, indeed, a Spain made of demographical desert, forgotten, which slowly seek to be known and spread out that affection and memory to the rural world, both a loophole from modernisation, which could be one of the keys to drawing the attention of the population to these realities and try to repopulate them. There are various causes and forms of depopulation. There is the one which has been going on for centuries, the one which depends on very-low-density ratios of the population that go, from year to year, decreasing more and more. This is the case of the highlands and foothills, to which we can add the mountainous areas of the northern peninsula. A second uncontrollable type is the relative one, which depends directly on the exponential growth of cities and coastal areas. This change in the distribution of the population confirms the exodus from the countryside to the city, but it is fair to point out that the Spanish rural population decreased from 1981 to 2011 only from 10.4 to 9.9 million inhabitants. A third and final form of depopulation is that one related to the concentration of population of the same rural areas, a phenomenon which is relatively rising but destined to increase more: since 1980 the number of inhabitants of countries with less than 2000 censuses decreased, while that of countries with more than 5000 residents has increased. In rural areas, the demographic crisis reaches values that suggest that some realities are at serious risk of extinction, suffering from generational ageing, continuous loss of inhabitants, all caused by the exodus of the population from rural areas<sup>2</sup>. Data from the INE (Instituto Nacional de Estadística) show that, according to provisional data updated in January 2020, more and more municipalities have suffered a demographic decline and have remained with less than 1000 inhabitants. Of the total of 8131 Spanish municipalities, 5007 do not reach the threshold of 1000 inhabitants. In 2011, Spain had 3834 municipalities with less than 500 inhabitants, the provisional data for 2020 pending the census of 2021, already add 4006. Also, 1400 other municipalities have fewer than 100 inhabitants or 17.2% of the Spanish total. The analysis of these data leads us directly to a worrying conclusion about the fate of some municipalities: the smaller villages are increasingly so and increase in number.

If we analyse data relating more specifically to the Andalusian territory, we can see how it counts today 109 villages with less than 500 inhabitants, of which 2 with fewer than 101 inhabitants<sup>3</sup> and areas of the Costa del Sol, in the South, and of the West territory, have seen a natural balance of the population in the last 30 years strongly positive, while in others, such as in the North-West and East, grew little or was negative.

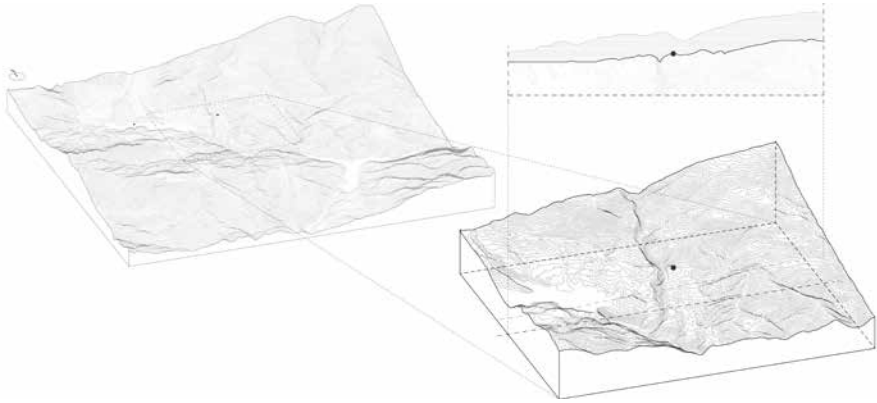
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<sup>2</sup> Federación Española de Municipios y Provincias, 2017.

<sup>3</sup> Instituto Nacional de Estadística, 2020.



**Fig. 4**  
Tablates's territorial framework: 3D and territory section  
Source: the authors from the Base Cartográfica de Andalucía.



In the case of the province of Granada, the annual growth rate (per thousand inhabitants) is negative as of 2017, but it follows the curve of the national trend, remaining below the average only in 2016<sup>4</sup>.

### Field research and mapping

Following the analysis of national and Andalusian demographic data, the study is focused on the situation of the province of Granada, to firstly map in this territory the villages in the process of being abandoned, with less than 50 inhabitants, and those already completely abandoned. It is considered appropriate to use a topographical map base in which we can appreciate the orography of the territory of Granada, which is one of the keys to understand the depopulation of some of the villages of this province, and the subdivision of the map into a grid in such a way as to be able to locate, following an order made of letters and numbers, the catalogued villages. Of course, the use of the grid is just a device, a tool, useful for the return of a large study that had to be organized to be spread, but it does not pretend at any time to “fit” in a cold and insipid grid these villages, each of which has its own identity, which probably has not been recognized by most and, therefore, has become one of the causes of the lack of repopulation, because “forgetting that this abstraction has its basis in local knowledge, leads to the negation of a whole complex and rich sphere of the relationship between men and things, men and spaces”<sup>5</sup>. From the Fig. 1 we can see a distribution of the villages with less than 50 inhabitants, marked in grey, more uniform in the territory, while that of the abandoned ones, in black, concentrated

<sup>4</sup> Instituto Nacional de Estadística, 2020.

<sup>5</sup> La Cecla, 2011, p. 54.

in two main zones, both characterized by a strong orography: the Altopiano de Baza in the central-eastern part of the province and the Alpujarra, in the South-East.

Once 106 countries have been located, a detailed analysis is made of the municipality to which they belong, reporting data on the territory, population and education (Fig. 2), the village itself, reporting the number of inhabitants<sup>6</sup> if it's not abandoned, the toponym, distinguishing in grey those with less than 50 inhabitants and in black those uninhabited, and the localization, according to the previously cited grid, besides a territorial framing on topographic base.

The study of the research for the toponym showed that one of the main problems was the identification of the villages before visiting them. The same, in fact, in some bibliographical sources of different years, the name of the village did not coincide, the toponym was not the same, and being the bibliography available not recent, was lacking in localization according to coordinates.

From the cataloguing emerges, as well as from the map, that there are municipalities such as Baza, with 15 abandoned villages, where there is the largest number of abandoned places, as well as in the south-east area of the Alpujarra Granadina, where the municipalities draw a smaller area than Baza and, therefore, several abandoned villages, but despite this, we can find a high concentration. By analysing the data on the services offered relating to education<sup>7</sup>, we can say that, in the case of Baza, for example, a large number of active structures is offered compared to other municipality, but all of them are concentrated in the municipality of Baza itself, therefore, in territories such as these with a high orography, access to educational services is complicated due to the excessive gentrification of the educational offer.

The conclusion of the research, mapping and analysis phase, is the creation of an infographic with which we can compare data about: population, society, economy, tourism and work situation, also establishes, according to a scale of three levels, the territory level of rurality. From the comparative emerges, in black and the left part of the graphic, that Baza, is the municipality with more abandoned villages. While as the villages in the process of abandonment, in the right portion of the circle, has in most cases a negative birth rate of population, signed in red, so these urban entities are likely to disappear little by little (Fig. 3).

Subsequently, to the data collected, this study includes a part of field research with a direct visit of some of the mapped villages. The information collected during the visit to each of these villages was the elaboration of a technical sheet of each of the village visited, in which gather, in addition to basic information such as the name, the coordinates, the location on the map (Fig. 2) and the year of construction or abandonment, others details about the level

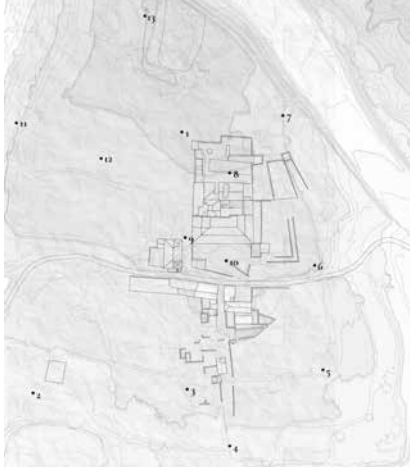
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<sup>6</sup> Instituto Nacional de Estadística, 2016.

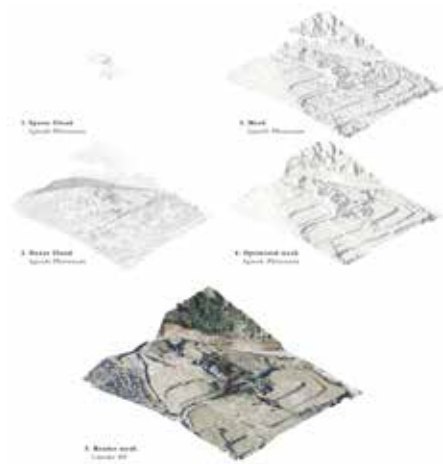
<sup>7</sup> Instituto Nacional de Estadística, 2016.



**Fig. 5**  
Current Tablate's site plan with the 13 GPS points location.  
Source: the authors from the Base Cartográfica de Andalucía.



**Fig. 6**  
Data processing steps from drone survey.  
Source: the authors.



**Fig. 7**  
Planimetry and territory sections, off-scale  
Source: the authors.

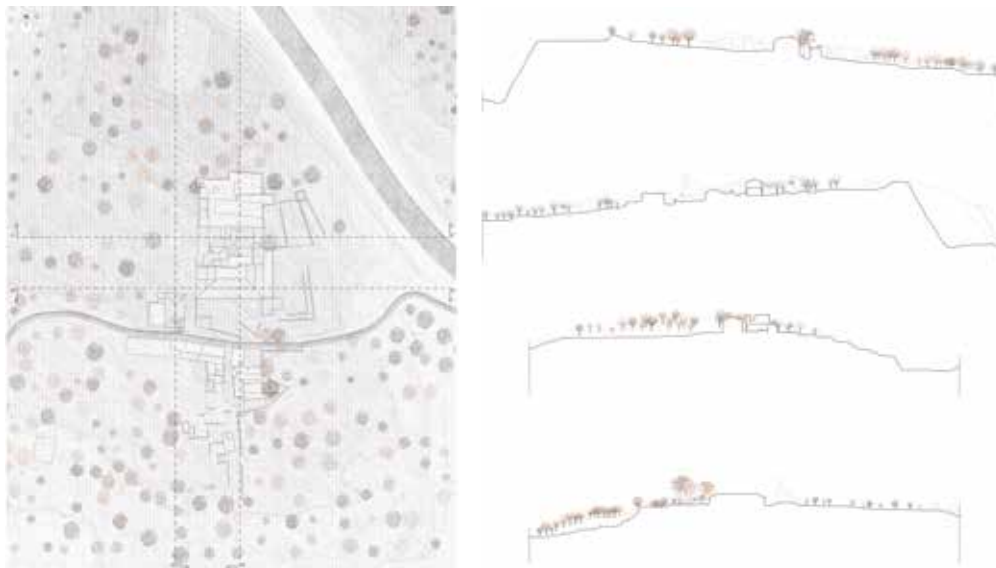
of the accessibility, the environment (altitude and orientation of the village), services (water and electricity supply, telephone network) and facilities (detailing architectural typology and its state of conservation). Many abandoned and not entirely abandoned villages have been visited, but making this sheet files made clear, on the one hand, the lack of bibliographic sources about, and on the other one, the little, or nothing, spreading of the heritage, tangible and intangible, present in most of these places, which is directly reflected on the deterioration of the structures and their state of conservation.

The need for conservation actions on historical artefacts was the reason for the choice of the case study, among the many villages visited, with the idea, not only to propose some restoration interventions but also to spread that often realities with a strong historical charge, as in the case of Tablate, fall into the oblivion of abandoned villages.

### The choice of the case study

Tablate is a small urban centre located in Granada's province, exactly in Valle del Lecrín, a strategic position for the Reino de Granada, which experienced its peak of splendour during the Nazari period, following the Roman and Visigoth domination. If the locality of Tablate was important at a historical level, it certainly owes it to its physical conformation and to the landscape in which it is inserted in Granada, one of the Spanish provinces with higher altimetric levels, an average of 600 m in more than 90% of its surface area, 800m in 80% and 2000 in 5%<sup>8</sup>.

<sup>8</sup> Rodríguez Martínez, 1985, p. 17.



It was precise because of the orography of the territory of the Alpujarra area that the Muslims decided to take refuge here during the war of the Alpujarras, moreover, as we can see from the Fig. 4, Tablate rises in the high ground and it is difficult to access there, coming from Granada. There are reports about the village, completely abandoned since the 90s, in the Catastro del Marqués de la Ensenada of 1753, which shows the bridge with the same name.

There are not many bibliographical sources about it, except someone written by Luis del Mármol Carvajal, through which we can understand the importance that this place had from a historical point of view. Tablate was, in fact, an obligatory passage for the control of this area<sup>9</sup> in such a delicate historical moment, as were the first years of Christian domination, after the fall of the Reino de Granada by the Muslims. It was in the Second Alpujarra War (1568-1571), when the Tablate bridge, the only access route to the Valle del Lecrín, was crossed by the Christians and conquered. The toponym Tablate is just one of the many encountered to mention these villages<sup>10</sup> and seems to derive from the tablones, wooden boards, with which the bridge was originally built.

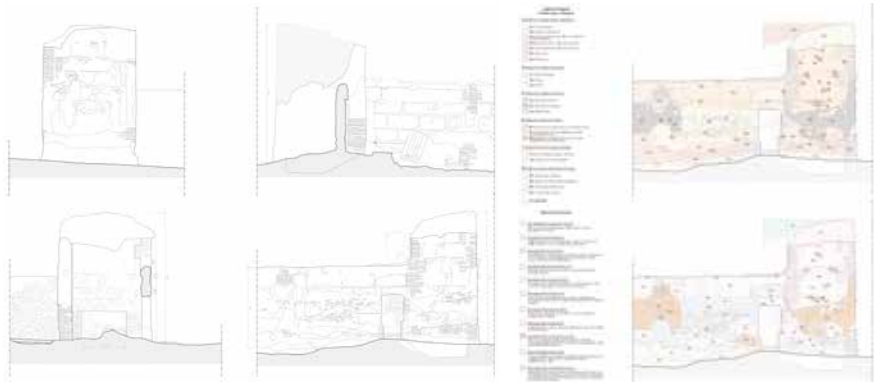
During the on-site visit, the technical data sheet is made also for other villages and the photogrammetric survey of Tablate is planned, carrying it out in two different kinds: one aerial and one terrestrial.

<sup>9</sup> Mármol Carvajal, 2015, pp. 279-281.

<sup>10</sup> Espinar, 2013, p. 87.



**Fig. 8**  
Tower elevations,  
graphic  
representation  
scale  
Source: the  
authors.



**Fig. 9**  
Degradation  
analysis and  
restoration  
proposal for  
the North tower  
elevation, off-  
scale  
Source: the  
authors.



**Fig. 10**  
Rendering views  
of final tower  
model  
Source: the  
authors.

To realize the survey of the village a well-consolidated procedure based on mixed aerial and terrestrial photogrammetry was adopted<sup>11</sup>. The survey campaign started with the aerial one based on the use of a drone, following various steps: -identification of 13 points with the GPS for georeferencing the 3D model, including also the areas where the buildings have now disappeared, to be able to provide, as fully as possible, the morphology of the ground (Fig. 5); -flight and image gathering, making two flights at different heights obtain a large-scale model (flying at 30m above ground level) and another one, more detailed to study carefully some areas of interest, to draw an exhaustive model of some structures (flying at about 20m above ground level); -data processing and analysis, using the software Agisoft Metashape/Photoscan (to make the Sparse Cloud, Dense Cloud, Mesh, Texture and Orthophoto), Raindrop Geomagic Studio (to optimize the mesh) and Maxon Cinema 4D for the final rendering (Fig. 6). With the data acquired from the survey and delivered in a 3D model, graphic drawings are realized as a masterplan and environmental sections (Fig. 7), from which it is perceived how much the topic of the orography and the altitude has been really important on the one hand for its construction, following the theme of defence from attacks, on the other as a possible cause of depopulation due to the difficult access, before the construction of the nearby A-348 that connects the village with Granada through the A-44. Finally, this research aims to concentrate on the detailed study of a tower in the village, encouraging, on the one hand, a study from a historical and bibliographical level, and

<sup>11</sup> Rodríguez-Navarro, et al., 2016.





on the other a detailed photogrammetric survey to realize architectural drawings, that will be used as a basis to plan and justify some restoration interventions.

Close to Tablate, we can locate several other buildings, mainly castles and towers, of the same medieval era. Some of the towers were *torres de alquerías y de vega* (generally located in the plain, they offered refuge to the inhabitants who did not have quick access to a fortified castle in case of attack, for this reason, their surface is normally high), while others were *torres vigías* or *atalayas*, as in the case of the Tablate tower. The latter were elements of control and communication, whose function was to monitor, from a strategic point of view, any movement of enemy troops, that could threaten the surrounding territory, and then give notice to the other towers by forming an important network, which was the key to the survival of the kingdom of Granada for a long time<sup>12</sup>.

The tower of Tablate most likely formed part of the small fortress that served to defend the garrison that guarded the bridge below. What we can see today must be a Christian building of the sixteenth century, rebuilt based on an ancient Muslim tower. It has a rectangular plan, with the largest sides oriented towards North-South, and it is built using *tapiá*, with walls with a thickness of between 45 and 55 centimetres<sup>13</sup>. Inside there is a small room of about 1.20 metres high, accessible from the eastern side and with the floor at a lower altitude than the other sides of the tower.

To survey the tower, we proceed with a terrestrial photogrammetric survey, taking photos with a mainly projective beam approach, then moving on to the alignment of the pictures

<sup>12</sup> Martín García, et al., 1999, pp. 29-31.

<sup>13</sup> Martín García, et al., 1999, pp. 372-373.

with the software Agisoft Metashape/Photoscan 14, optimizing the mesh with Raindrop Geomagic Studio and rendering it with Maxon Cinema 4D. During the alignment and orientation phase with Agisoft Metashape/Photoscan, georeferencing is carried out based on four points in common between the model coming from the terrestrial survey and the same four points coming from the aerial one, which was previously geo-referenced with the 13 GPS points before mentioned. Once the 3D texturized model is obtained, the vectorization of it is carried out with the use of the software Autodesk Autocad and so to draw plants, elevations and sections (Fig. 8).

On these architectural documents, thanks to the level of detail of the texture generated by photos originally taken during the flight and image gathering phase with low ISO value to avoid noise in the photo, in RAW format and with detail shots, it was possible to proceed to an accurate decay analysis, with the consequent proposal of restoration (Fig. 10). The decay analysis is etiologically organized, dividing the degradation encountered according to the cause that has originated them, considering this a method of intuitive and easy reading to move to the subsequent restoration proposal. It seeks to associate to each type/cause of degradation one or more restoration interventions, for eliminating or curing the cause, intervene effectively and sustainably on the artefact (Fig. 9). Finally, rendering views of the final model is generated (Fig. 10).

## Conclusions

This study aims to highlight only some of the issues which comprehension is necessary to understand depopulation, a process as interesting as complex, which claims to be studied in the most interdisciplinary way, bringing out its innumerable facets.

Despite the rigid methodology of the study, the organization of data and the restitution of architectural works, this research aims to show and spread that there are many abandoned countries with a high heritage, tangible and intangible, which must be protected, preserved and diffused. It is bitter that abandoned villages, which now don't have a certain name and are difficult to be located on a map, but which continue to be placed, according to the definition given by Marc Augé<sup>15</sup>, being them identity-related, relational, although in an often unknown past, and historians, are unfortunately anonymous identities. We want to believe that this is only a temporary situation, waiting for a new "baptism", a repopulation.

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<sup>14</sup>Rodríguez-Navarro, 2012.

<sup>15</sup>Augé, 2010, p. 77.

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Villages et quartiers à risque d'abandon sont aujourd'hui une problématique commune à des nombreuses régions de la Méditerranée, considérée comme un point stratégique dans les nouvelles politiques européennes. L'abandon progressif des zones internes est une constante dans les pays caractérisés par le sous-développement économique, avec les phénomènes d'émigration et de fragmentation du patrimoine culturel. Cela entraîne des problèmes d'architecture et de gestion du territoire. L'objectif principal de ce travail de recherche est de créer un espace de discussion qui comprend l'étude du patrimoine architectural et du paysage ainsi que les témoignages démo-ethno-anthropologiques.