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# Population Dynamics in Spanish Mountain Areas: Case Study of Two Regions in the Cantabrian Mountains (Spain)

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## ABSTRACT

This paper synthesizes some of the most significant results of a research project that has been developed along three years, from 2007 to 2010, in which researchers from several Spanish universities participated. The main objective was to detect and diagnose conditions that occur in the current process of socio-economic renovation and innovation in mountain areas. At the same time, we addressed the study of dynamics and processes of change that have occurred in these areas in recent years. All these have determined new forms of occupation and organization, set new directions in land use and opened a discussion on the balance that this model represents. Today, one of the main problems afflicting many of these mountainous areas is the low human occupancy as evidenced by the predominance of extremely low population densities. Most municipalities have an average density of less than 10 inhabitants/km<sup>2</sup>, which is considered the threshold of "demographic desertification". This weak potential makes difficult to revitalize locally and impairs the development without input of outsider population.

## 1. INTRODUCTION

Along with some small differences introduced by the unequal surface dimensions of the regions studied, the scarce human occupancy is a relatively recent fact linked to the small volume of population now living in these territories. In turn, the meagre population size is the result of a regressive dynamics marked by continued losses of population since the mid-twentieth century, particularly during the sixties and seventies, although temporal and spatial differences must be stated and specified in each case. And, what is even more serious is the intense decrease of labour force that continues to the present. It is true that decline has become moderated in recent years, particularly since the beginning of 21<sup>st</sup> century. However, significant population growth has sometimes

been registered in county towns (Ramales de la Victoria and Villarcayo) triggering even more local imbalances.

However, many mountain areas have continued to lose population even during the years their territorial contexts registered significant growth. Or, when the territorial context reversed, they suffered a much more pronounced population reduction. This is a common denominator that also affects mountain areas though well placed and with positive economic dynamism due to their proximity and accessibility to urban-industrial centres, but in this case the reduction values are much smaller. Some of these counties have begun to gain population in the last decade due to the development of their residential function as periurban areas of nearby cities. The essential factors of the decline are: the continuous rural exodus motivated both by the pursuit of the traditional agricultural model

crisis and by the accelerated modernization, although this seems contradictory at first sight and the difficult living conditions in the mountain areas and lack of employment opportunities, particularly for women, the main protagonists of the recent rural emigration.

Also, the socio-economic reality that explains the second factor, the existence of a negative natural balance for years shows a state of biological depletion by the decrease of birth rates and increase of mortality.

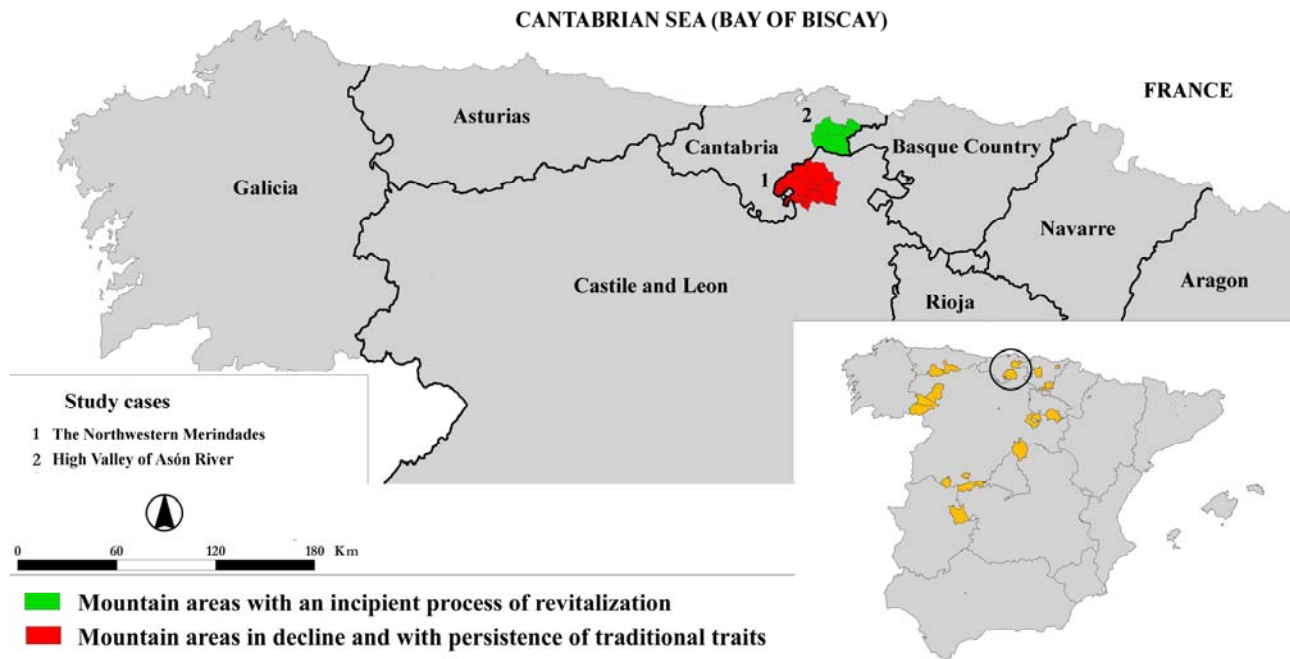


Fig. 1. Localization of regions under study.

The corollary of this demographic decline is represented by the increasing ratio of male population and the continuous aging process at different levels, which in some cases go to the extreme, whereas in others they remain at slightly lower levels, but they always affect seriously the stability of demographic structures defined by obvious signs of disarticulation. Although the recent presence of non-resident related population favours the demographic increase for a few weeks of the middle of the summer, it does not help resolving the basic problems of mountainous population.

The regressive evolution of population has also induced changes in the settlement organization pattern of these regions. Not including some partial exceptions, the traditional settlement system consists of numerous small population nuclei, villages and "neighbourhoods". Their dimensions have been declining more and more as the depopulation process progressed to the point that many of them, yet without physically disappearing, have lost all of their inhabitants and determined the growing number of villages depopulated existing in some counties.

At the same time we notice the redistribution of the few inhabitants who remained in these areas who tend to concentrate in the main population centres of the region, where they can benefit from facilities (healthcare, education, etc.) and significantly improve their quality of life. Therefore, with too few exceptions,

mountain areas under study now share the population growth of county capital cities to the disadvantage of other towns.

From another perspective, a shallow and rapid analysis of data that addressed the employment distribution of productive sector reveals that the areas where more traditional traits survive and are demographically more regressive are those in which the weight of the agricultural sector is most obvious and dominant in employment.

## 2. METHODOLOGY AND DATA

The results which this research delivered are the following: 1) definition of the different forms of articulation and socio-economic integration of mountain areas, 2) recognition and diagnosis of the new dynamics of socio-territorial structure, the processes of functional specialization and transformation of territorial models, and 3) the evaluation of policies, initiatives and programs in mountain areas and design of proposals to promote sustainable development and territorial cohesion.

The ultimate aim is to try draw general conclusions from various case studies and to further deepen the singular features and characteristics of the selected areas. Many of the selected cases correspond to different regions of the mountains of northern Spain as part of the Cantabrian Mountains, two of which, the

high valley of Asón River (west of Cantabria) and The Merindades north-western (north of the province of Burgos), are located in the eastern area of the Cantabrian Mountains.

The research was achieved from conducting fieldwork and cabinet work. In summary, the tasks and activities carried out over three years may be categorized as follows:

- *fieldwork*: recognition on the territory, surveys and interviews / meetings in the area and collection of statistical and documentary in the regions and provincial organisms and autonomous institutions.

- *cabinet work*: review, reading and emptying of local and regional literature, design, development and delivery of surveys, exploitation, processing and interpretation of surveys and information and design of graphics and mapping.

The main objective to be achieved through the methodology and the work plan was to develop a common database which should provide information obtained at the municipal level through different indicators. This database provided the key project information. It included basic variables of different types: Territorial (geographical area, spatial units and subunits: districts, municipalities, villages, etc.); Demographic (population trends in recent years, current absolute population, population density, settlements structure); Housing stock; Communication infrastructure; Land use and exploitation (livestock, forestry, farming, development of use intensity indices, indices of specialization, etc.); Other forms of exploitation (mining, old and new industries); Rural tourism centres and associated jobs; natural protection items (national parks, regional parks, nature reserve, natural monuments, etc.); Programs, initiatives and actions for rural development (Leader, Proder) and financing the various measures developed within these interventions; and other forms of land use and planning (including municipal planning figures).

### 3. RESULTS AND DISCUSSION

#### 3.1. Features and general characteristics of mountain areas under study

The region of the high valley of Asón river, located on the south-eastern corner of the Autonomous Community of Cantabria, corresponds to the territory of the headwaters and the medium-high watercourse of the Asón River. Located on the northern slope of the Cantabrian Mountains, the morphological organization of the relief of this county is determined by the deep cleft of the rivers that cut perpendicularly the main landforms to go to lead into the Cantabrian Sea (Bay of Biscay). The result of the cut is a very rough and abrupt relief characterized by alternating narrow valleys, oriented S-N and SW-NE and separated by high interfluvies formed by the karst massifs of Hornijo and

Mortillano that culminate around 1200-1500 m and are closed in the south by the continuous front of the high crests of the mountain range culminating between 1,384 m and 1,625 m.

Administratively, the region is divided into five municipalities (Arredondo, Ramales de la Victoria, Rasines, Ruesga and Soba) occupying an area of less than 425 km<sup>2</sup>, 8% of the regional territory. Its main population nuclei are located at an average distance of the regional capital, Santander, between 45 and 75 minutes, which, together with geomorphologic conditions, explains the relative isolation and persistence of very pronounced traits of rurality.

The ancient county of The Merindades occupies the Northern part of the province of Burgos, in the Autonomous Community of Castile and León. It is located on the southern slope of the Cantabrian Mountains and consists of nine municipalities with a full mountainous status.

The north-western sector, with an area of 773 km<sup>2</sup> and a population of 6,979 inhabitants in 2010 is bounded on the north and west by the southern valleys of Cantabria. In this northern sector of the province of Burgos, also identified as the Mountains of Burgos, conform folded reliefs, constituted by a sequence of wide synclines to large radius and small anticlines, acquire supremacy [1].

The morphostructural unit that articulates most of the territory is the vast syncline Villarcayo-Medina de Pomar; with a width of 25 km, it covers almost 50 km from NW to SE. Much of the regional territory corresponds to structural depression of the bottom of the Villarcayo syncline and the great longitudinal depression opened in its large northern flank. This one causes an alignment of massifs that form the watershed of the Cantabrian Mountains in the eastern sector and the delimitation between Cantabria and Burgos; formed by the front of the crests facing north, a significant fall of about 1,000 m vertically, while several rivers, in this case tributaries of Ebro and therefore belonging to the Mediterranean watershed, make transverse cuts in some cases N-S and more often NW-SE in the back of the crests that form the southern slopes of the mountains range. The distance from most places of the region to medium size urban centres is considerable (one and a half hour on average to get to the provincial capital) and very limited conditions of accessibility, resulting in the maintenance of a relatively isolated situation. As the recent economic dynamics, in both counties the agricultural activities remain the spine of rural economy, hence the essential agent of socio-spatial organization. Also, the processes of transformation of agricultural and livestock economy and landscape have had a common denominator, the trend toward productive specialization in bovine cattle that has led the spread of meadows and pastures and the continuous simplification of the agricultural land uses. In the case of the district of the high valley of Asón

river, the current predominance of livestock production is obvious because the average of agricultural land intended for natural meadows and pasture exceeds 70% of the agricultural area. In The Merindades, the distribution of agricultural land use also shows clearly the prevalence of livestock farming and forestry,

although the agricultural land still holds a significant share in the context of the Cantabrian Mountains areas: the average of the agricultural area for permanent pasture exceeds 60% of the Agricultural Used Area (UAA), but this value is also widely exceeded in many municipalities.



Fig. 2. The Soba Valley in the region of high valley of Asón river.



Fig. 3. The north-western Merindades: the north flank of the big syncline of Villarcayo.

However, both regions under study differ in the productive orientation of their herds. In contrast to what happened in other Cantabrian mountainous districts, in the high valley of Asón river milk

production remains priority despite of some effects the implementation of the quota system in the European Union has had but the production constraints proved to be the key factor for increasing the average size of the

dairy farms. Also, the livestock exploitation remains an increasingly fundamental pillar of farming in The Merindades because in the last years of the 20<sup>th</sup> century an important growth of livestock potential has occurred. Most of the increase has corresponded to the enlargement of the bovine herd (59.3%) with spectacular increases in some municipalities, based on specialization in beef cattle, whose maintenance is made through extensive land use; consequently it can qualify as ecological farming to some degree, and it is supported by various forms of guarantee and quality control of products. Both districts have passed through a process of structural changes that turned into accelerated disappearance and concentration of farms at an even greater level than in other nearby rural areas. In 1982 there were still registered 3,555 farms in the high valley of Asón river, whereas 17 years later the total number reduced to 927 (-74%). In The Merindades there were 1,772 farms in 1982 and only 620 in 1999 (-65%) [7].

The result of this process, yet incomplete, has been the alteration of the structure of agricultural productive units: the average size of the farms land base has increased from 28.8 ha of Utilized Agricultural Area (UAA) in 1982 to 37 ha in 2009 in the region of high valley of Asón river and from 45.1 ha of UAA in 1982 to 129.3 ha in 1999 in The Merindades [7].

From the data provided by the Agricultural Censuses of 1982 and 2009 it is noted that there was a substantial reduction of labour force employed in agricultural activities (-74% in the county of high valley of Asón river and -49.2% in The Merindades). In both cases, the decrease in the total amount of work is firstly a direct consequence of the reduced number of farms and the productive reorientation, particularly the consolidation of extensive use, and finally the result of the mechanization of agricultural work, which had taken place earlier. The current agricultural active population is less significant in number but, at least, their aging process seems to have been controlled. The recent dynamics seems to be in the sense of exclusivity and intensification of agricultural activity for people who hold the ownership of farms fact that can be interpreted as a sign of progress for professionalization in this sector, but may be also related to the fact that the non-agricultural employment opportunities remain very limited in the county. In addition, the current changes have generated a process of economic concentration and have provoked unparalleled increase in territorial disparities, previously very considerable in terms of spatial distribution of non-agricultural activities. In the case of The Merindades the only municipality that practically benefit of growth was Villarcayo, which in 2009 registered about 73.1% of licenses to practice economic activities. In the region of the high valley of Asón river the municipality that agglutinates the largest number of licenses, more than half of the total county, is Ramales de la Victoria. In the region of the high valley of Asón river a good part of the

natural elements has been protected by different measures contained in the legal framework on which the Cantabrian environmental protection policy is based, Law 4/2006 of 19 May on Nature Conservation in Cantabria, which incorporates in its articles all issues concerning the Natura 2000 network, the most important protection areas being the Natural Park of Collados del Asón (4,740 ha), the Asón river SCI (530.5 ha) and the East Mountain SCI (21,679 ha) [8].

The north-western sector of The Merindades, like the whole region is a rich "mosaic of ecosystems and landscapes", as the slogan of the district asserts, with the special presence of numerous singular elements. Many of them have been protected by different figures: the Natural Park of Gorges of High Ebro and Rudrón Rivers (46,373 ha), the SCI of the same name and the SCI of the Ebro Reservoir (7,306.25 ha), Guareña Eye (13,141.84 ha), the Riverbanks of Nela River and Tributaries, and several SPAs whose territories overlap in many cases. Since 1996, the Autonomous Community of Cantabria has implemented the Operational Program for Rural Development and Economic Diversification (PRODER) to several areas of the Community among which the municipalities of the Asón and Agüera rivers basins [2, 3, 4, 5, 6]. The tourist use of land and landscape resources have also been stimulated by the Tourist Dynamisation Plan that was set up for the municipalities of high valley of Asón river between 2002 and 2004 after the signing, in November 2001, of a partnership agreement between central, regional and local administration (Community of Municipalities of High Asón) and business representation of the county (Association for the Promotion of Tourism High Asón), counting also with the collaboration of PRODER. Since 1991, the region of The Merindades has benefited from the Leader initiative whose management has been conducted by the Association CEDER (Centre for Rural Development) who coordinated the Leader I, Leader II, the program Now (framed in the Community Initiative "Employment and Human Resources Development"), Leader+ and the project "Accedem" under the Equal Community Initiative. On the other hand, the Government of Castile and León has applied the "Special Action Plan for Peripheral Areas of Castile and León 2000-2006", mostly in the mountain areas of the region. Therefore, the territorial area of The Merindades was integrated into one of these Special Plans, the "Peripheral Area of the Ebro", whose substantial objective was to articulate the programs aiming to overcome the structural deficiencies of the area and to encourage new factors and elements of social and spatial dynamism.

### **3.2. The regressive character of the population dynamics**

According to the Population Census of 2010 the high valley of Asón river includes a total of 6,633

inhabitants and The Merindades 6,979 people, a low volume of human resources in both cases that resulted from a continuous process of population loss that lasted for decades.

### 3.2.1. Over a half century of population decline

The people contingents of both counties have suffered an incessant decrease in the second half of the twentieth century and first years of the 21<sup>st</sup> (from 1950 until 2010). The calculated reduction of inhabitants is of -46.5% in high valley of Asón River and -64.9% in The Merindades while people of their respective regions increased. But in both cases, the true severity of the decline is masked because of the compensation that occurs between different areas of the countries whose development has been quite uneven.

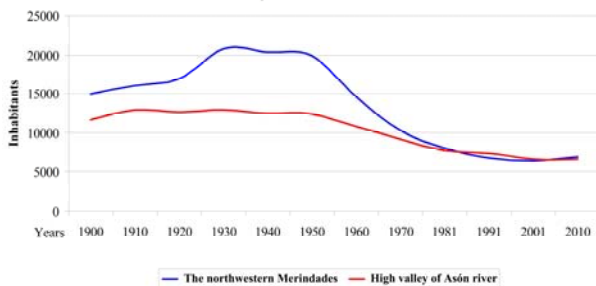


Fig. 4. Population evolution (1900-2010).

Table 1. Recent evolution of the population of the high valley of Asón river (Cantabria) and the north-western Merindades (Castile and León, Burgos).

Municipalities	1950 (inhab.)	1981 (inhab.)	Δ 1950-1981 (% annual)	2001 (inhab.)	Δ 1981-2001 (% annual)	2010 (inhab.)	Δ 2001-2010 (% annual)	Δ 1950-2010 (% annual)
Arredondo	1,361	812	-1.92	620	-1.18	517	-2.08	-62.01
Ramales de la Victoria	2,645	2,439	-0.37	2,242	-0.4	2,650	2.27	0.19
Rasines	1,617	1,109	-1.5	946	-0.73	1,058	1.48	-34.57
Ruesga	2,671	1,420	-2.23	1,213	-0.73	1,041	-1.77	-61.03
Soba	4,097	2,023	-2.41	1,637	-0.95	1,367	-2.06	-66.63
<b>High valley of Asón River</b>	<b>12,391</b>	<b>7,803</b>	<b>-1.76</b>	<b>6,658</b>	<b>-0.73</b>	<b>6,633</b>	<b>-0.05</b>	<b>-46.47</b>
<b>Cantabria</b>	<b>404,921</b>	<b>513,123</b>	<b>1.27</b>	<b>535,131</b>	<b>0.21</b>	<b>592,250</b>	<b>1.33</b>	<b>46.26</b>
Alfoz de Bricia	1,198	216	-3.9	143	-1.69	96	-3.65	-91.99
Alfoz de Santa Gadea	614	182	-3.35	168	-0.38	113	-3.64	-81.6
Arija	1,909	289	-4.04	229	-1.04	181	-2.33	-90.52
Merindad de Sotocueva	2,889	857	-3.35	569	-1.68	477	-1.8	-83.49
Merindad de Valdeporres	2,175	637	-3.37	527	-0.86	461	-1.39	-78.8
Valle de Manzanedo	1,146	181	-4.01	130	-1.41	137	0.6	-88.05
Valle de Valdebezana	3,692	1,118	-3.32	745	-1.67	592	-2.28	-83.97
Valle de Zamanzas	470	34	-4.42	87	7.79	67	-2.55	-85.74
Villarcayo Merindad de C. la V.	5,772	4,558	-1	3,801	-0.83	4855	3.08	-15.89
<b>The north-western Merindades</b>	<b>19,865</b>	<b>8,072</b>	<b>-2.83</b>	<b>6,399</b>	<b>-1.04</b>	<b>6,979</b>	<b>1.01</b>	<b>-64.87</b>
<b>Province of Burgos</b>	<b>397,048</b>	<b>363,825</b>	<b>-0.41</b>	<b>348,934</b>	<b>-0.19</b>	<b>374,826</b>	<b>0.82</b>	<b>-5.6</b>

Source: own elaboration based on data from Census of Population (National Institute of Statistics).

As relevant as the spatial differences are the chronological differences. As in most Spanish rural areas, the strongest outflow occurred during the sixties and seventies, two decades during which the region of high valley of Asón river has suffered a population annual average decrease of -1.3% and the Merindades of -2.1%, in both cases negative values being registered in all the municipalities.

But the most significant and serious is the continuity of losses later, particularly in the final years of last century, and, what is even worse, in the first decade of the present century: from 2001 to 2010, although moderate, population reduction has continued simultaneously with the regional population growth. Moreover, the recent dynamics is more discriminating because, while some municipalities continue to have annual declines greater than in previous years, others have begun to grow. Among the reasons for the decrease of the population volume it is necessary to emphasize that the process of emigration that hit the region for many decades has not yet finished, at least in some places. To this we must add, as a contributory factor, the changing patterns of reproductive behaviour that these regions, like other rural areas, have experienced in recent decades and that they are most eloquently expressed by the declining birth rate and the rising mortality rate.

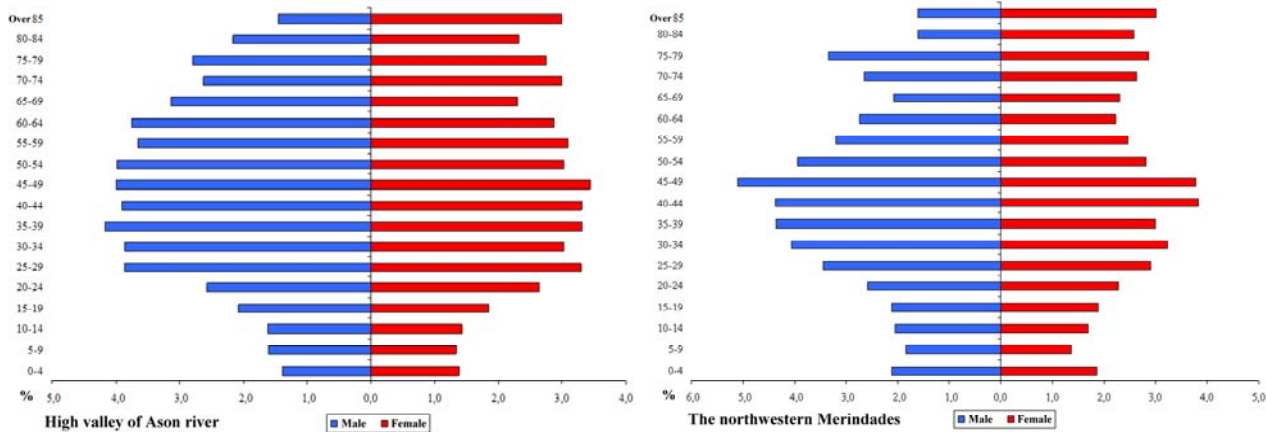


Fig. 5. Demographic structure (2010).

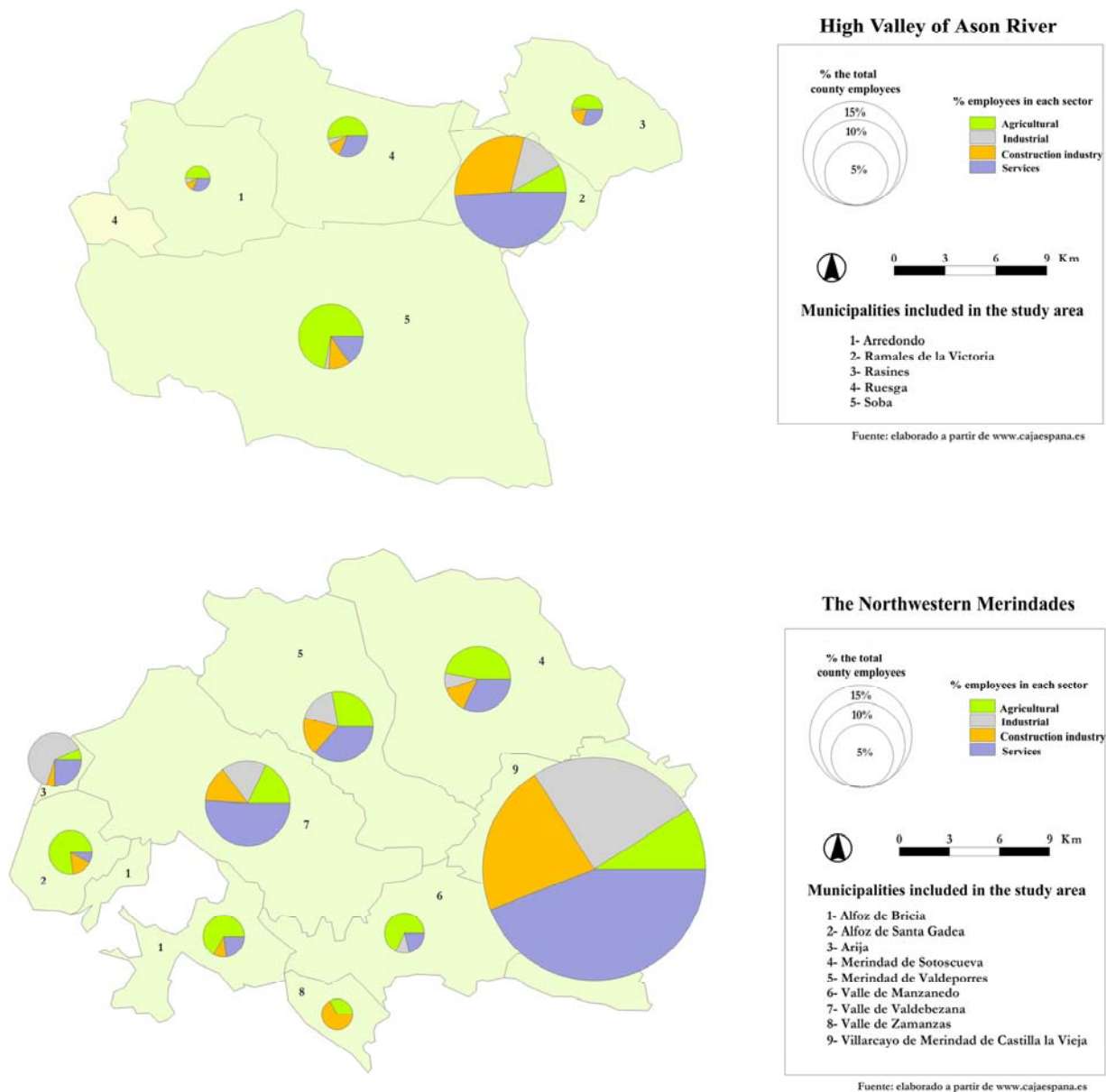
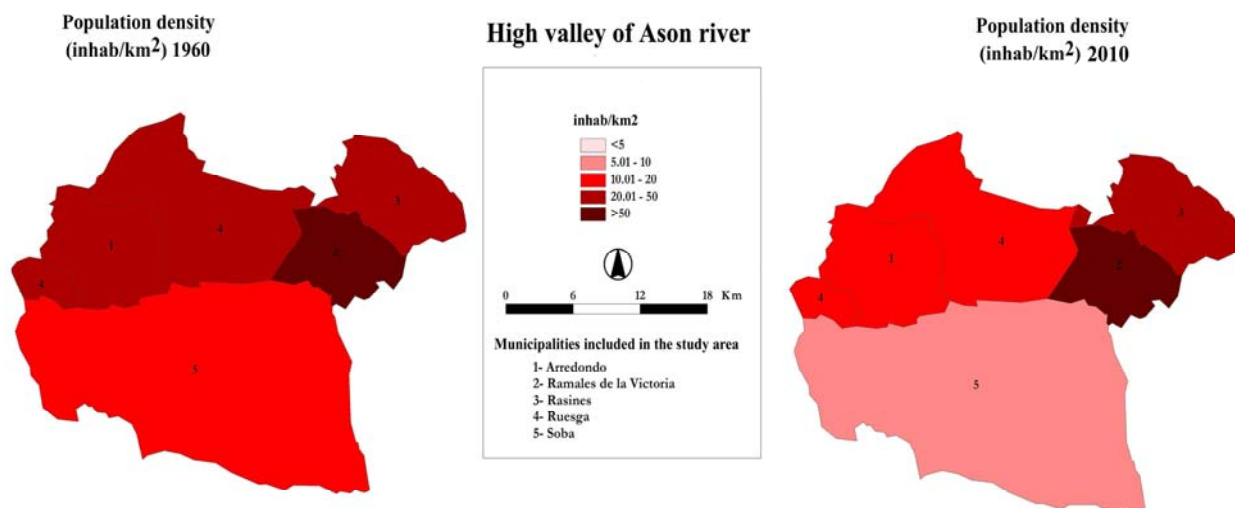
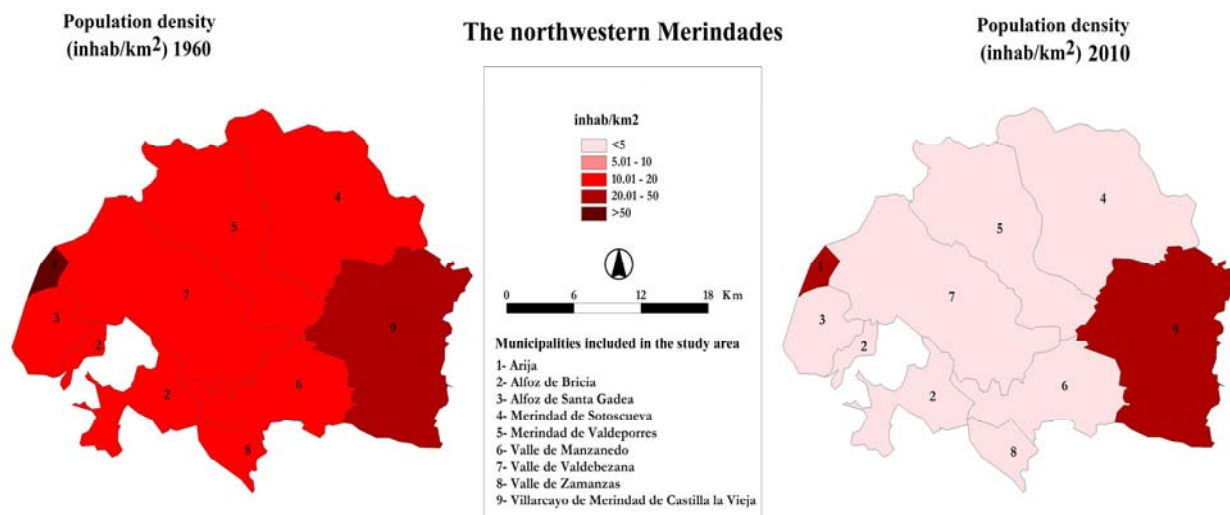


Fig. 6. Sectoral structure (2007).



Fuente: elaborado a partir de INE (Censo de Población de 1960 y Padrón de Habitantes de 2010)



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Fig. 7. Evolution of population density (1960-2010).

The population dynamics has strictly conditioned a very unbalanced demographic structure according to composition by gender and age. Firstly, we must underline the exaggerated numerical supremacy of male population. In 2010, at local scale it was 53% in both regions versus the regional average of 49% in Cantabria and 50.7% in Castile and León [9].

It is also an aged population because almost a quarter of people are over 65 years old; there are also municipalities characterized like very aged where older people account for almost one third of the total population, or even more, in some cases registering more than 40%.

Among the elderly population, the octogenarians, most of whom are women (63.3%), begin to have a very large presence (8.9%).

### 3.2.2. The belated process of diversification of rural employment

With regard to the total active population, one of the most eloquent facts is the smallness of general rates of activity, constantly decreasing in the last decades of the twentieth century: if in 1981 the average value was just over 50% in the high valley of Asón river, with little higher values in certain municipalities, none of them reached that value at the beginning of this century. The case of The Merindades is also relevant because the local average was less than 43% in 1981 and has not even won three percentage points in the next twenty years (45.5% in 2001). But the most remarkable in both cases is the extraordinary gap between the rates of male and female activity, the



latter being much smaller: the female activity rate was lower than the male rate by 26.4 % in The Merindades in 2001. This dynamic is not strange to be observed in different sectors of activity. Like in most rural areas, the population employed in the primary sector has begun to transfer to other sectors of activity, particularly to services, although the process seems to have started here later. However, there is an eloquent difference between regions: in the high valley of Asón river the process of tertiarization has been late and slow while in The Merindades has also been late but quite fast. The agricultural workforce is in very high percentage in both counties, while industrial workers have had very limited share but their number has grown slightly in The Merindades. In contrast, construction and services have increased their numbers of employees in significant percentages in the same period in both districts. The final result in the county of the high valley of Asón river was an excessively modest and insufficient process of diversification of local economy rather than a process of tertiarization strictly speaking, while in The Merindades, there has been an important process of diversifying the local economy at least in terms of employment.

### **3.3. The transformations experienced in the occupation of territory and the settlements pattern**

The population decline and other demographic changes presented above are manifested in the territory through the continued decrease in population density of both districts, with values well-below the respective regional and provincial average values that, by contrast, have been increasing, in a case, or have remained at the other, during the same period of time. The average density of 15.6 inhab./square kilometre in the high valley of Asón river and 9.0 inhab./square kilometre in The Merindades masks the reality which is much more contrasted in these regions. If the municipality of Ramales de la Victoria has a density that can be considered high for a rural mountain area (80.4 inhab./square kilometre), some municipalities of this district do not reach 10 inhab./square kilometre and others just reach this number which is considered the minimum for territorial sustainability. Many other municipalities do not reach 5 inhab./square kilometre with values that put them in a very advanced stage in the depopulation process.

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inhab./square kilometre and others just reach this number which is considered the minimum for territorial sustainability. Many other municipalities do not reach 5 inhab./square kilometre with values that put them in a very advanced stage in the depopulation process.

Moreover, the territory of high valley of Asón river is beginning to suffer from the urban pressure of the nearby cities, the metropolitan area of Santander and, far more highly, the Basque conurbation of Bilbao. On the contrary, the north-western area of The Merindades does not suffer from an urban pressure similar to that in other nearby mountain areas, including its own eastern area. The presence of holiday homes is not new in the county of high valley Asón river as evidenced by the high proportion of second homes censused in 2001 (39% of the housing stock). Most of them are houses that remained unoccupied as a result of emigration more or less recent. However, since the last decade of the twentieth century, the beginning of a new fact is perceived, the construction of new houses specifically for holiday usage.

Since then, residential building has had a spectacular growth and its primary stimulus was without doubt the rise of the residential secondary function that this area has begun to have, especially for people coming from the Basque Country.

Thus, although we do not have more precise data, it does not seem mistaken to suppose that most of the 2,270 building permits issued between 2001 and 2010 had the purpose of building holiday houses rather than primary homes for people permanently resident that, within the same period of time, had a clearly regressive evolution, as explained before. The number of building permits issued allowed building a volume of housing that is more than 50% of the housing stock censused in 2001, with special intensity in Arredondo and Ramales de la Victoria, whose stock of houses almost doubled.

It is therefore highly eloquent that the construction boom was particularly important between the years 2005 to 2007 as a result of increasing demand for second homes and its displacement towards the inland areas in order to dodge the restrictions on building imposed in coastal municipalities by the Coastal Management Plan (POL), approved in 2004.

One of the most significant indicators of these new residential uses, which the county of the Merindades also has, is the presence of second homes that in 2001 reached 67.2% of houses. However, most of them are houses that were left vacant as a result of emigration, with some exceptions (Arija on the shores of the Ebro reservoir, and Villarcayo). The increasing use of second homes is confirmed by the presence of population that, though residing elsewhere, is linked regularly to the county. In 2001, the volume of "non-resident related population" amounted to 2,393 people in the high valley of Asón river and to 10,242 people in

the Merindades. Also, in 2010, the maximum seasonal population amounted to 11,638 people in high Asón

valley and to 20,052 people in The Merindades, nearly three times the usually resident population at that date.

Table 2. Evolution of the housing stock in the high valley of Asón river at the first decade of 21<sup>st</sup> century.

Municipalities	Stock of houses censused in 2001		Building permits for new houses 2001-2010		Estimated stock of houses in 2010	
	(no.)	(%)	(no.)	( $\Delta$ %)	(no.)	(%)
Arredondo	368	9.2	332	90.2	700	11.1
Ramales de la Victoria	1,489	37.1	1,610	108.1	3,099	49.3
Rasines	609	15.2	135	22.2	744	11.8
Ruesga	788	19.6	153	19.4	941	15
Soba	764	19	40	5.2	804	12.8
<b>High valley of the Asón River</b>	<b>4,018</b>	<b>100</b>	<b>2,270</b>	<b>56.5</b>	<b>6,288</b>	<b>100</b>

Source: own elaboration from data of the Professional Association of Cantabrian Technical Architects, Permits for new houses construction.



Fig. 8. The new typologies of building: housing developments of second and leisure homes.

Among the consequences of the population dynamics and of the construction activity we consider necessary to mention the emerging change in the traditional settlements pattern in the Cantabrian Mountains characterized by dissemination of people in a large number of tiny nuclei among which many houses are scattered.

Although in essence the model is still in force in both regions, the recent dynamics consisted in the emptying of the smaller nuclei, some of which disappearing in the last fifty years (17 in The Merindades) or being about to be totally uninhabited because they have now less than 5 inhabitants. In contrast, the remaining population has concentrated in the larger nuclei: 21.2% of the population of high valley of Asón river and 26.3% of The Merindades were living in municipal capitals in 1960 while in 2010 their number reached 39.6% and 63.2% correspondingly.

In parallel, a gradual change in the traditional rural housing is observed. Next to traditional houses in most cases new real estate developments introduced

new building typologies that previously belonged only to urban areas (blocks of flats and housing estates with single family homes, isolated or detached).

#### 4. CONCLUSIONS

In the light of the analyzes set out in the preceding paragraphs, the current territorial dynamics seems marked by several traits related to each other: the continued decline of population since the mid-twentieth century, the persistence of a heavy weight of agricultural activity and the insufficiency of the recent diversification of rural economy. These three characteristics, along with some secondary traits, highlight the prevalence of the traditional permanence over the new features submitted by the latest changes. Thus, one of the greatest problems of these regions resides in the shortage and lack of variety of complementary or alternative jobs to farming, which reduces to minimum the opportunities of remunerated employment for certain social groups, especially youth

and women. The initiatives and programs to promote sustainable development in the county as well as the plans for environmental and cultural heritage protection have focused on take advantage of potential of increasing social demand for spaces well preserved and their socio-economic appreciation. However, their implementation is very recent, or they are still mere projects, so have only just begun to be felt their positive desired and undeniable effects. These new circumstances are not alien to the extraordinary rise in territorial imbalances in favour of main nuclei of the counties that seems to have demographic and economic effects on emptying of the rest of the region more than to be poles of diffusion of activities and of expansive dynamics from the header nuclei.

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