

## URBAN AREAS IN THE IBERIAN PENINSULA THE DELINEATION EXERCISE

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### 1. INTRODUCTION

Globally the EU (European Union) is one of the most urbanized areas, more than 75% of its population lives in urban areas, while urban land represents 25% of Europe's surface. These and other features raise serious concerns about the behaviour of urban and metropolitan areas of the EU. In 2020 it is estimated that 80% of Europeans residing in urban areas and in some countries the proportion will exceed 90% of the population. So we are looking at some changes in land use, landscape modifications and transformations of the very significant means. The EU cities extend and reduce turn-time distances between them. In fact, urban expansion remains from the last 50 or 60 years. This urban sprawl is one of the main challenges to be studied within the current urban EU, as more and more European urban areas where the rate of change of use of rural land to urban, is higher than the rate of population growth (EUROSTAT, 2014).

So to this reality, in this work the criteria set forth to identify and delineate the urban areas of a particular space EU: Spain and Portugal. It is therefore a work Iberian scale. The Iberian Peninsula is located in southwestern Europe; it is surrounded by the Mediterranean Sea to the east and southeast by the Atlantic Ocean to the west and southwest, by the Cantabrian Sea to the north and joined the rest of Europe by the northeast by the mountain system of the Pyrenees. To the south, the peninsula is separated from Africa (Morocco and Algeria) by the Mediterranean Sea and a short flight across the Atlantic Ocean. In turn, these water bodies are separated by the Straits of Gibraltar. The peninsula has 583,832 square kilometres and almost all are occupied by the countries of Spain and Portugal, but also includes the country of Andorra and the British territory of Gibraltar. However in this work on the Iberian Peninsula, we studied only mainland Spain and Portugal.

As for the urban space of the Iberian Peninsula, at present there are different methodologies for its delimitation. In fact both Spain and Portugal offer diverse cartography and reports with their respective urban areas. However in this paper is applied to the Portuguese case already used in the Spanish case (MINISTERIO DE FOMENTO, 2009, 2014), supporting turn in Portuguese jobs (GASPAR, 1995; FERRÃO, 2000; MEIXIDE VECINO *et al.*, 2001; ALONSO SANTOS *et al.*, 2002; FERRÃO *et al.*, 2002; BAPTISTA, 2003; SÀ MARQUES, 2003, 2004; DOMÍNGUEZ *et al.*, 2004; AML, 2014), as well as the general criteria used in the EU (ETE 1999; EEA, 2006; EUROSTAT, 2008, 2014). So the main objective is to define homogeneously urban areas of this territory in southern Europe.

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## **2. BRIEF APPROACH TO THE INITIATIVES OF ANALYSIS AND LIMITS OF URBAN AREAS IN EUROPE**

Throughout the last decade of the twentieth century and early twenty-first century, they developed a series of initiatives, programs and even constituted institutions focusing on the study of urban areas in the EU. So in this section are discussed briefly: the European Spatial Development Perspective, the project Urban Audit, ORATE (Observatory Network of European Spatial) or ESPON (European Spatial Planning Observation Network) and the ranking of European cities as its functions and population size. Some of these criteria were used to define the urban areas of the Iberian Peninsula cited in the section on methodology.

In Europe we find NUTS, LIGHT, FUA or MEGA, different territorial delimitations are made following methods and various indicators. Some of these areas are administrative in nature and others can be considered perfect for the study of urban territory. However, in this work an exercise of delimitation of the peninsular urban areas of Spain and Portugal as a whole is performed using the same criteria in which Spanish, Portuguese and European methodologies are combined.

## **3. METHODOLOGY FOR THE LIMITS OF URBAN AREAS IN SPAIN AND PORTUGAL**

The methods of delimitation of urban and European metropolitan areas generally are based on statistical data and usually follow the same pattern. It begins selecting urban cores that meet standard requirements of urban space and surrounding areas are added maintaining connection with the core. The most commonly used to "connect" these areas are often of population, volume of building, infrastructure, daily commuting, etc. indicators Among the most significant examples in Spain, there are several works (ROCA CLADERA 2003, 2012; SERRANO MARTÍNEZ, 2006; BOIX DOMENECH, 2007; FERIA TORIBIO, 2008; SALOM CARRASCO *et al.*, 2010; RUIZ GONZÁLEZ, 2011). These methodologies are heterogeneous, but follow a common goal, the delimitation of urban areas. After analyzing these and other international methodologies for carrying out this work the methodology can be defined as more official is employed. The methodology used from the Spanish Government, specifically the Ministry of Public Works in collaboration with different departments such as the National Institute of Statistics, for carrying out the Digital Atlas of the Urban Areas of Spain.

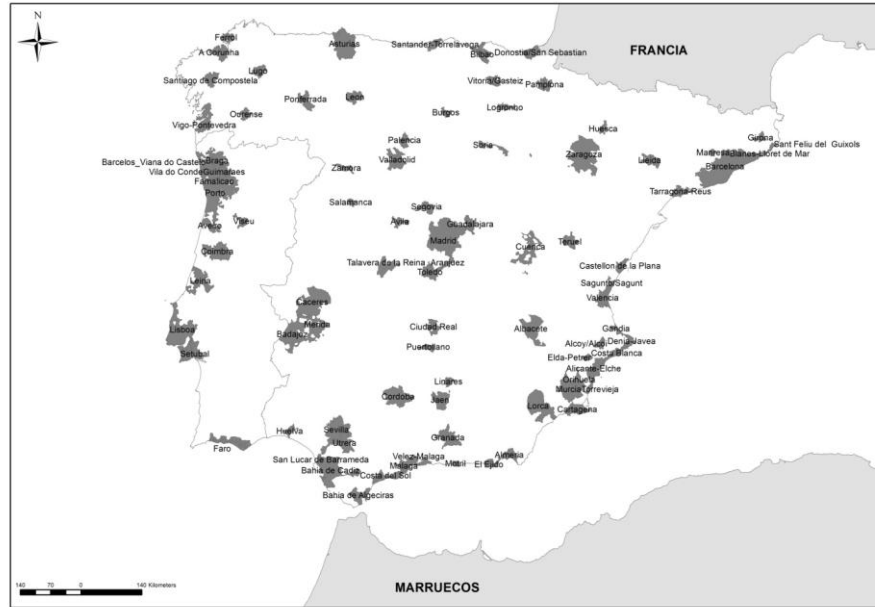
Each and every one of these criteria is applied in a stepwise manner and order. Municipal and freguesias that do not meet the first criterion are analyzed and the following will apply them on. This process was performed using a GIS (Geographic Information System) tool and split into two phases. In the first census and statistical information bases in Spain and Portugal at the municipal level and freguesia respectively they emptied. To all this information and coding treatment it was performed. In a second stage to relate these statistics with the territorial base the map of the Iberian Peninsula. Throughout the process of setting up urban areas according to the criteria of the Ministry of Development of Spain, the results were contrasted with those of ESPON and Audit Urban at European level and a Portuguese scale, the National Statistics Institute of Portugal. So for the completion of the demarcation of the urban areas of the Iberian Peninsula they methodologies Spain, Portugal and the EU were used (SERRANO MARTÍNEZ, 1990; GASPAR, 1995; LÓPEZ TRIGAL *et al.*, 1997; FERRÃO, 2000; MEIXIDE VECINO *et al.*, 2001; ALONSO SANTOS *et al.*, 2002; FERRÃO *et al.*, 2002; BAPTISTA, 2003; SÀ MARQUES, 2003, 2004; AML, 2014).

## **4. PRESENTATION AND CHARACTERISTICS OF URBAN AREAS IN SPAIN AND PORTUGAL**

In the Iberian Peninsula a total of 89 urban areas were delineated, in Spain and in Portugal 76 13. In Spain are located both on the coast and in the hinterland and the most significant socioeconomic axes are identified: the Mediterranean, the Atlantic and the centrality of Madrid. In the case of

Portugal itself a clear imbalance coast-interior is detected, it is on the coast where urban areas are located and especially the attraction of the cities of Porto and Lisbon is detected (Figure 1).

FIGURE 1  
Territorial distribution of urban areas in peninsular Spain and Portugal



Source: compiled from the National Institutes of Statistics of Spain and Portugal (2014)

## 5. CONCLUSIONS

Spain and Portugal are two different and with its own idiosyncrasies territories. But in the globalized world in which we find it is important to bring new areas of study in these urban cases, which go beyond administrative boundaries that often wield power "frontier" that prevents us to study the true characteristics of the territory. Therefore, with the completion of this work we have achieved the main goal set, mapping the urban areas of the Iberian Peninsula by applying a common methodology. But also today we are in a second phase of study and territorial analysis of the past and present of the urban areas of the Iberian Peninsula, because this delimitation of Iberian urban areas is linking a large database with indicators grouped by subject demographic, economic and social.

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