

# **The Outward Expansion of the Built-Up Areas of Madrid and Barcelona into their Surrounding Metropolitan Regions (1986-2004)**

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## **ABSTRACT**

The modern process of urbanisation was experienced in Spain later than that compared with other European countries. It was after 1959 when urbanisation began to advance in an accelerated manner, owing to increasing industrialisation, the crisis of traditional agriculture, general increases in the population and large-scale interregional migrations. Nel-lo (2004) identifies the formation of a series of large metropolitan areas, which dominate the whole Spanish urban system; the consolidation of territorial axis which tended to concentrate population and activities; and the maintenance of the bicephalous nature of the urban network around this time, as the three basic elements of the Spanish urban system in the second part of the 20th Century.

As a consequence, Spain's seven principal cities were converted into modern metropolises of a regional, national and in the case of Madrid and Barcelona, European standing, experiencing their major growth in the period 1960–70 in the case of Madrid, Barcelona, Valencia, Bilbao and Zaragoza, and in the period 1970–1980 in Málaga and Sevilla.

While traditionally Southern European or Mediterranean cities have been characterised for their more compact urban form, compared to Northern European cities, currently there is considerable concern in Spain over the question of land consumption and the outward expansion of urban areas into surrounding rural areas. This concern can be witnessed within the context of seeking to achieve more sustainable patterns of urban growth, and social and economic, as well as territorial, cohesion, reflecting the contemporary spatial planning policy objectives of the European Commission.

Research carried out between 2003–2006 with funding from the Spanish Central Government, together with complementary funding from the European Commission under the INTERREG IIIB Programme, enabled a comparative assessment to be made of the physical growth experienced by Madrid and Barcelona over the period 1986–2004. Functional approaches to the territorial analysis of the two metropolises have previously contrasted the mononuclear urban form of Madrid, with the more

polynuclear form of Barcelona. However this recent research, based upon the interpretation of satellite imagery, has highlighted clear differences in their morphological form. As outlined in this paper, Barcelona's metropolitan urban region has a more compact central area with an important distribution of economic activity in its peripheral area, whereas the central area of Madrid's metropolitan urban region is much greater in spatial and demographic terms, containing a more significant proportion of the urban region's economic activity than the periphery.

**Key Words:** morphology, urban form, teledetection