

## THE DIVERSITY OF THE CLIMATIC-TOURIST APTITUDE IN THE COAST OF ALICANTE

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In this study, climate data for the coastal region of the province of Alicante, Spain, has been analyzed, with consideration of the region's suitability for tourism.

The method used is the weather types method established by Martínez, E. (2006, 2008a y 2008b). This is based on the differentiation of thirteen classes. The days analyzed have been classified according to the tourist's basic requirements with regard to climate (*see* Besancenot, J.P., 1978 and 1991; De Freitas, C.R., 1990, 2001, 2003 and 2005; Gómez B., 2000, 2003, 2004a and 2004b; and Martínez, E., 2006, 2008a, 2008b).

In accordance with the above, and based on daily data, the following variables have been considered: daily fraction of radiation (Fr); daily precipitation (P); daily maximum temperature (Tx); Siple and Passle index (K); Tom index (THI); daily wind velocity at 13 h. (V); and daily partial water vapor pressure in the atmosphere (U). The methodology employed for the differentiation of the classes, and the thresholds, appear in Martínez, E. (2006, 2008a, 2008b).

The study of climate suitability for tourism in the Alicante coastal region has been structured in two sections. In the first section, the results have been analyzed on a general seasonal level, according to the range of favorable and unfavorable types. In the second section, attention is devoted to the climatic diversity at a daily resolution.

On a general level, the most important results indicate a lesser climatic suitability for tourism in the northern coast region (represented by the locality of Denia). Between the central and southern regions the differences are minimal; their homogeneity is pronounced. These results fit the initial hypothesis, given the greater incidence of levanters in the far north of the province of Alicante.

The seasonal results show an accentuation of regional differences during the summer. They do not coincide with the expected results, given that the easterly advection over the mediterranean not tend to appear during the summer (*see* Azorín, C., and López, J.A., 2004: 306-307).

To attempt to explain this inconsistency, the results have been studied with consideration of the favorable and unfavorable weather types. The more frequent incidence of excessive

heat in the far north of the Alicante coast is the cause of the lesser tourism potential of this area. These results are certainly not consistent with what is expected. Consequently, it is advisable to conduct a more detailed analysis.

On the other hand, the results obtained for the equinoxes and the winter correlate with what is predicted. So, during the autumn and spring, and particularly in the autumn, the greater rainfall in the north has caused a reduction in tourism potential.

Qualitative differences have also been noted during the winter. These likewise reflect the greater incidence of easterlies in the far north of the Alicante coast.

Additionally, with daily resolution, an approximation of the range of climatic suitability for tourism of the Alicante coast has been carried out. Thus, the atmospheric situations prevailing between June 2004 and March 2005 have been studied thoroughly, particularly those linked to a low pressure gradient.

The sources consulted have been: the GFS and MASS models; and the maximum temperatures recorded in Denia, Altea, Villajoyosa, Pilar de la Horadad, Javea, and Alicante. Additionally, meteorological observation has formed an important input.

For the area of study, three types of weather have been differentiated. They are: NW with a low pressure gradient, atmospheric situations with mixed southern flow proceeding from the third quadrant, and NE to leeward.

The first type, NW with low gradient of pressure, is characterized by higher climate-tourist aptitude in the regions of the *Marina Baixa* and south of the *Marina Alta*. This is due to the greater aerological sheltering of the above-mentioned administrative units from a NW flow. Thus, the thermal and hygrometric records are lower in these regions.

The second type, atmospheric situations with mixed southern flow proceeding from the third quadrant, has also been linked to a greater suitability for tourism in Marina Baja and the southern Marina Alta region. In this case, with this type, as the SW winds have a greater marine influence in this sector, comfortable summer conditions are more prevalent.

On the other hand, in correlation with the third type, NE to leeward, the region of Marina Baja suffers the Foehn effect. Thus, with this type, during the hottest period, this region has lesser tourism potential.