

Perception of temperature and wind by users of public outdoor spaces
Relation with weather parameters and personal characteristics

Henrique ANDRADE^a*; Maria João ALCOFORADO^a; Sandra OLIVEIRA^a

^a Centre of Geographical Studies, University of Lisbon, Alameda da Universidade,
1600-214 Lisbon, Portugal

E-mail addresses: handrade@fl.ul.pt; mjalc@fl.ul.pt; sioliveira@fl.ul.pt

* Corresponding author

Address: Centre of Geographical Studies, University of Lisbon, Alameda da
Universidade, 1600-214 Lisbon, Portugal

Tel.: +351-21-792 00 87; fax: +351-21-793 86 90

E-mail address: handrade@fl.ul.pt

Perception of temperature and wind by users of public outdoor spaces Relation with weather parameters and personal characteristics

Abstract: With the aim to understand relationship between declared bioclimatic comfort, atmospheric conditions and personal characteristics of individuals (such as age, origin, clothing, activity and motivation, among others), questionnaire surveys were made during the years 2006 and 2007, simultaneous with weather measurements (air temperature, relative humidity, solar and long wave radiation and wind speed), in two leisure open areas of Lisbon (Portugal). The analysis was carried out considering the desired expressed by the individuals to decrease, maintain or increase the values of the air temperature and wind speed, in order to improve their level of comfort. Multiple logistic regression was used to analyse the quantitative relation between preference votes and environmental and personal parameters. The preference for a different temperature depends on the season and is strongly associated with wind speed. Besides, a general decrease of discomfort with increasing age was also found. On the other hand, most people declared preference for lower wind speed in all seasons; the perception of wind shows significant differences depending on gender, with women declaring a lower level of comfort with higher wind speed. It was also found that the acceptability of warmer conditions is higher than for cooler conditions and that adaptive strategies are undertaken by people to improve their level of comfort outdoors. This study was developed in the framework of the project “URBKLM: Climate and urban sustainability. Perception of comfort and climatic risks” (POCI/GEO/61148/2004), co-financed by FCT and FEDER.

Keywords: (5)

Bioclimatic comfort; personal parameters; thermal environment; logistic regression;