عنوان مقاله:

Thermal bioclimate factor using in urban and architectural planning, the case study of Yazd, Iran

محل انتشار:

سومین کنفرانس بین المللی علوم جغرافیایی (سال: 1395)

تعداد صفحات اصل مقاله: 6

نویسنده:

Mahnoosh Mokhtari - *Yazd University*

خلاصه مقاله:

Urban climate studies play a significant role in providing essential information for the development of thermal comfort in cities. This paper provides thermal bioclimate analysis of a case study in Yazd, Iran, using meteorological data air temperature, wind speed, relative humidity, cloud cover, global radiation for period 2000 to 2012 from Iranian Meteorological Institution by which employed Rayman Pro model to calculate Mean Radiant Temperature (Tmrt) and Physiological Equivalent Temperature (PET). Simulation of shade conditions and wind speed variations were done to evaluate thermal bioclimatic conditions that have a direct impact on urban morphology. Obtained results show that solar radiation and wind speed variations not only have a considerable influence on air temperature but also more extensive thermal comfort and heat stress as well. Furthermore, by simulations of wind speed variations and shade conditions prove that shade has a beneficial influence on improvement of outdoor thermal comfort that can be explained in terms of PET. These results are precious for architects, urban planners and designers for a description of thermal comfort and also the development of possibilities for improving microclimatic conditions based on urban design and configuration.

کلمات کلیدی:

thermal bioclimatic conditions, Physiological Equivalent Temperature (PET), mean radiant temperature (Tmrt), urban spaces