



## **Bioclimatic Conditions in Bulgarian Black Seaside in the 21<sup>th</sup> Century**

**A. Tzenkova-Bratoeva, J. Ivancheva, V. Alexandrov**

National Institute of Meteorology and Hydrology, Sofia, Bulgaria, e-mail:  
ani.tzenkova@meteo.bg

In the process of integration of Bulgaria in European Community the tourism became one of the main branches of economy. To answer the needs of fast and expansive development of tourism in Bulgaria it is necessary to have detailed information about the climate potential and the length of the tourist season in order to determine the sustainable development of the tourist industry.

The aim of this work is to estimate the human comfort conditions in Bulgarian Black Sea coastal area. The analysis is based on the daily data from Varna, Burgas and Ah-topol meteorological station for a 10 year period. The expected bioclimate is estimated using the data for air temperature and humidity for the years 2015, 2025, 2050 and 2100, obtained by V. Alexandrov on the basis of the results from HaDCM3 and ECHAM4 climate change scenarios.

Different indexes such as THI, PET, PMV, RSI and SSI have been used to assess the human comfort conditions. The obtained results show that the given region is suitable for tourism and sport activities from April to October. The estimation of expected climate change could be of big support for future sustainable development of tourist industry in Bulgarian Black sea costal area.