

STUDY OF THE URBAN HEAT ISLAND IN IASI MUNICIPALITY USING REMOTE SENSING AND GIS

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Abstract

Current climate change in urban areas is manifested due to the rapid urbanization of cities around the world. The island of urban heat is represented by a metropolitan area significantly warmer than the environment. It is important to find a balance between urban expansion and the temperatures recorded in these areas to guarantee sustainable urban development. This paper is a study to highlight the temperature of the ground surface (LST values) both during the day and at night, for the area of Iasi municipality. Remote sensing and GIS techniques were used for the case study. In order to make LST maps, MODIS images, taken daily by the Terra and Aqua satellites between 2013-2018, were used as primary data. Also, a number of 8 sensors were installed on the ground in the study area in order to monitor the temperature in the 2013-2018 period. The conclusions of the study indicate the need and the importance of carrying out such analyzes in the study of environmental issues..

Key words: GIS, heat urban island, LST, MODIS, remote sensing
