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SEASONAL OCCURRENCE OF HEAT ISLAND PHENOMENON IN THE URBAN BUILT ENVIRONMENT

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Abstract

Latest analysis regarding the climate change phenomenon arises issues related to air quality, human comfort within urban environments and an increased energy demand attributed to the building sector. The Urban Heat Island (UHI) phenomenon is directly responsible for the poor quality of life in cities and for increased energy consumption. Characteristic features pertaining to a specific urban environment, such as local microclimatic conditions, urban morphology and anthropogenic heat release respectively, generate this phenomenon. Therefore, local studies must be conducted for a specific urban settlement, being very relevant for adopting suitable strategies that aim to counteract the harmful effects of UHI phenomenon. In this respect, the paper presents results of a study case comprising an investigation of the UHI occurrence and intensity for the city of Iasi, Romania. Analysed data is based on information regarding temperature values for the summer of 2013, gathered through an experimental ground-based sensor network comprising 7 observation points within the metropolitan area of Iasi city.

Keywords: climate change, heat island, urban built environment, UHI intensity

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