



Climate change and extreme temperature events impacts on human health in Skopje

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Republic of Macedonia is a land locked country in the south-east Europe with total land area of 25 713 km² and population of approximately 2 million of which about 60% live in the urban areas. As signatory of the UNFCCC and belonging to the Non Annex1 group of countries, Macedonia has prepared its Second National Communication which contains the analyses, results and recommendations of technical expertise undertaken by expert institutions that implemented complex activities in the thematic areas, fully utilizing the resources and results of relevant prior or ongoing national and international related activities.

The assessment of the potential impact of climate change on one of the most important sectors- human health stressed that climate change over coming decades could have various effect on the health, especially on some groups of human population. An increased frequency of severity of heat waves would cause an increase in heat-related mortality and illness.

About 1/3 of the total population in Macedonia lives in Skopje, the capital city of the country where a large amount of the industrial complexes are placed as well. Specific orographic conditions of the city area, placed in a basin and surrounded by hills and mountains, intensive urbanization and increase of its population during past years, determine urban climate of Skopje and emphasize the enlargement of potential health risk of heat stress.

The presentation will comprise the analyze of the extreme temperatures for the period 1925-2005 for Skopje met.stations according to Jenkinson distribution. Analyzed

will be cases exceeding certain temperature level and lasting more than characteristic number of days.

Temperature inversions during winter accompanied with frequent and prolonged days with radiative fog and intensive air pollution are another problem of the urban environment of Skopje. Presented will be the special case of 20 days continued fog occurrence in January 1993 with registered levels of SO_2 concentrations 7 times and smoke 14 times higher than maximum permissible concentration.