



## **The Magnitude and the Duration of Pluviometric Deficit in the Field of Kosovo**

Demë Abazi<sup>1\*</sup>, Besnik Gjongecaj<sup>2</sup>, Abdullah Nishori<sup>3</sup>

<sup>1</sup>Scientist, Public Water Management Company, "Ibër Lëpenc", Prishtina, Kosovo; <sup>2</sup>Department of Agro-environment and Ecology, Agricultural University of Tirana, Kodër Kamëz, Tirana, Albania;

<sup>3</sup>Scientist, Regional Environmental Center, Field Office, Prishtina, Kosovo

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**Abstract:** The study to determine the magnitude and the duration of pluviometric deficit was done in the region of "The Field of Kosovo", in two climatic particular areas, Komoran and Vushtri, significantly different from each other. A meteorological station was set up in each area and as a part of it, in each case, the evaporimeter Pan A was installed. The respective meteorological stations are equipped with the necessary devices to measure the amount of rain, and also, all the climatic parameters such as sun radiation, relative humidity, wind speed and temperature, necessary to be used for potential evapotranspiration calculation. A particular computer program was adjusted to convert automatically the above data measured by the devices into potential evapotranspiration, expressed as mm evaporated water per day, calculated based on the Penman-Monteith formulae. Simultaneously, for each experimental trial, the water evaporated from the evaporimeter Pan A was measured, at least 3 times per day, in a well determined schedule. The potential evapotranspiration was measured as well, by using the atmometer in a field planted with alfa alfa, which is kept in the conditions of a constant plant height and optimally irrigated, as it is defined by Penman. The measurements done by atmometer were as frequently as the measurements done by the evaporimeter Pan A. The three of them,  $ET_p$ ,  $ET_{atm}$ ,  $ET_{evap}$ , were used to quantify the pluviometric deficit for both locations.

**Keywords:** *Pluviometric defici, potential evaporation, Penman Monteith formulae, evaporation from a free water table, evaporimeter Pan A, sun radiation, wind velocity, relative humidity, air temperature, atmometer, measured potential evapotranspiration, calculated potential evapotranspiration.*

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\* Corresponding author: E-Mail: [demeabazi@hotmail.com](mailto:demeabazi@hotmail.com);