

Weather hazardous phenomena along with the Drini River in Albania

L. Muçaj (1), V. Mustaqi (2), E. Bruçi (3)

Hydrometeorological Institute, Tirana, liri_mucaj@yahoo.com / 223518

One of the greatest problems nowadays is becoming natural disasters. All the countries are affected and all the activities are suffering from these phenomena. For that reason in order to meet these adverse weather phenomena based on the statistical methodology the following elements as: Heavy rain (intensity and amount), Maximum and Minimum Absolute Temperature, Strong winds (wind roses), Snow (maximum snow depth and number of days) have been analyzed in our paper.

In the threshold calculation for adverse weather phenomena identification we shall use the frequency distribution of meteorological variables.

Referring to the result we can draw some conclusions:

The central and western part of this zone is characterized by high values. The amount of 24 hours precipitation in Lezha station recording in September 2002 of 368.7mm remain the highest value in all yearlong series of September months starting since 1951.

Taking in consideration the threshold $>35^{\circ}\text{C}$ for the entire zone the bigger number of days are observed in the low altitude and the minimum one in the high altitude. Regarding the minimum absolute temperature, they vary from -10°C in the down stream of Drini River in Lezha, up to value -23.4°C recorded in Dega station, which is the lower value observed in this zone.

Weather elements, which become adverse when it reaches extreme values is the wind. In Lezha station the maximum wind speed have reached value 40 m/sec.

The wind speed becomes dangerous for human activities when it is greater than 15 m/s.. The highest value of the cases with wind speed more than 15m/sec (63 cases) is recording in Lezha and Puka (1983).

The snow depth is another climatic element which can become an extraordinary event when it reaches high values. Taking into account that the mostly of this zone is high-land, this phenomena is present every year.

Based on the statistical method the snow depth over 0.5m is choused as threshold for calling this element dangerous.

The maximum snow depth and the days with snow higher then 0.5m for each year are

analyzed. Analyzing the result we find out that after year 1976 the dangerous days by snow depth almost do not exist with exception the year 1985 when the snow depth reaches the height about 150 cm and the number of snow days reached up to 16 days.

Key words: precipitation (intensity and amount), strong wind, max and min absolute temperature, snow depth.