

# CHANGES IN PRECIPITATION REGIME IN SARAJEVO (1894-2003)

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**Abstract:** On the basis of researches of the Sarajevo meteorological station, the analysis spans from 1894 to 2003 and employs the “adding of linear trends” method in relation to global tendencies. The data were analyzed on the basis of primary climate parameters: average annual temperatures, absolute annual maximum and minimum temperatures, annual sum of precipitation and drought index. If compared with global tendencies, the analysis shows as follows:

- The increase of average temperature for 0.7 grades Celsius in last 100 years (ref.1);
- No major changes in annual precipitation sums (ref.1);
- Occurrence of trend of asymmetry during particular seasons (ref.1);
- General drought increase (De Martone index; ref. 1);
- The rapid increase of temperature and drought-index in comparison of trends between the periods of 1894-1993 and 1894-2003. **No significant changes in precipitation**, either monthly or annual sums, were noticed. (ref. 1);
- Precipitation regime changes are noticeable;
- Tendency of increase in precipitation intensity and reducing number of drought days during colder seasons (October-March; fig. 3 and 4);
- Tendency of decrease in precipitation intensity and increasing number of drought days during warmer seasons (April-September; fig. 1 and 2);
- The presence of Mediterranean precipitation regime in mountain regions of Bosnia and Herzegovina is evident. The climatogram analysis for the periods of 1894-2003 and 1994-2004 verifies the fact.

## 1. DISCUSSION

Tendency of increase in drought season occurrences and tendency of decrease in a five-day maximum precipitation during warmer seasons (April-September) is noticeable. Furthermore, tendency of decrease in drought season occurrences and increase in a five-day maximum precipitation during colder seasons (October-March). Climatograms (Fig. 5 and 6) in the past decade reveal a progressing tendency of precipitation increase in months between September and December, while in others, especially February, March and May, tendency of precipitation decrease is more or less evident. It is argued in the essay that similar tendencies are noticeable in one, two or three-day precipitations and drought seasons occurrences, which proves the changes in precipitation regimes. Further researches will focus on immediate rains. Due to a lack of data for consecutive hundred-year period, an employment of considerably different method will be required.

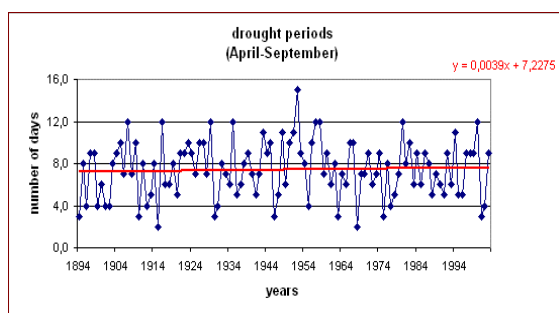


Figure 1.

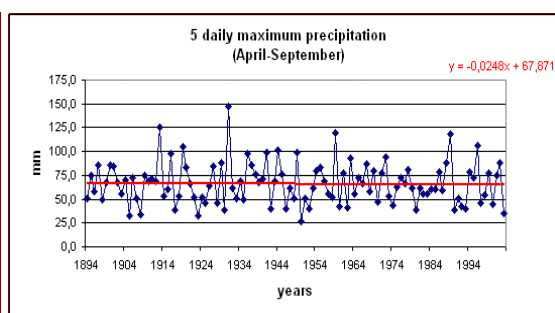


Figure 2.

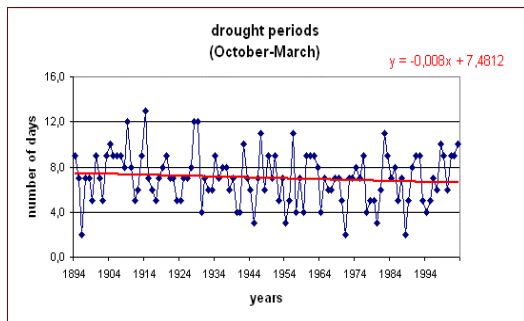


Figure 3.

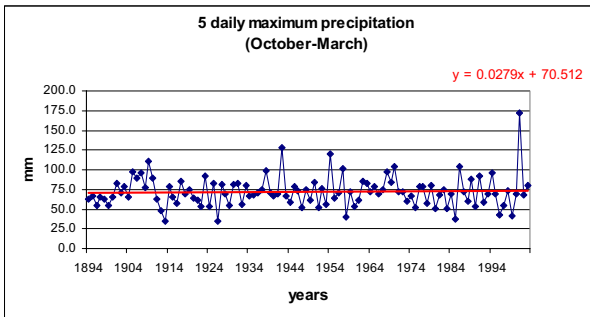


Figure 4.

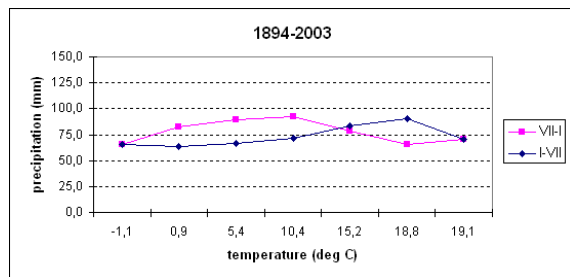


Figure 5.

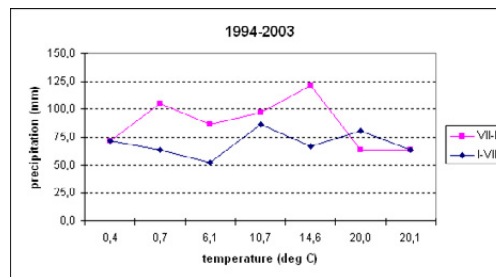


Figure 6.

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