O 102. THE EFFECT OF THE SOUTHERN OSCILLATION ON YEŞILIRMAK BASIN

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ABSTRACT: Recent studies have shown that climate changes have important effects on the components of the hydrological cycle. Large-scale oscillations as a result of the atmosphere movement are climate anomalies with periodic characteristics. In this sense, understanding the mechanisms controlling the variability of the Southern Oscillation will help us to understand the systems that control climate change. For this reason, in this study, the effect of Southern Oscillation was investigated on the region by comparing the homogeneity and trend analysis of the rainfall data of the meteorological stations 17085, 17086, 17084, 17030 of the Yeşilırmak basin in the Black Sea region with the extreme phases of the Oceanic Nino Index table. In the statistical analysis of rainfall data were used for homogeneity analysis; Buishand, Pettitt and Run tests and for nonparametric trend analysis; Mann-Kendall test, Modified Mann-Kendall test, Spearman Rho test and Sen-T test. The slope direction of the data was determined by using a trend slope method suggested by Sen, and the beginning years of the statistically meaningful changes were determined by using the Mann-Kendall rank correlation test. As a result of the study, while the fracture years obtained from the Pettiitt Test and the years that high index values were parallel, the method addressed as iterated Mann-Kendall cannot detect a clear intersection across the basin.

Keywords: Black Sea, Southern Oscillation, Trend Analysis, Precipitation