Geostatistical Analysis of Winter Rainfall for 2013 in Eastern Black Sea Basin, Turkey (comparison of the past status and future projections)

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Rainfall is one of the most important climatic factor for environmental studies. Several methods (Thiessen polygon, Inverse Distance Weighting (IDW) and Kriging etc.) have been used by researchers for spatial interpolation of rainfall data. Kriging is a geostatistical method which is based on spatial correlation between neighbouring observations to predict attribute values at unsampled locations. The study area, Eastern Black Sea Basin is one of the highest rainfall accumulations in Turkey according to the measured station data (1942 – 2011). Eastern Black Sea Basin is the only basin in Turkey with an increase amount of winter (October, November, December) rainfall for 2013 in comparison to the long term mean and previous year winter rainfall. Regarding to the future projections (Ustaoglu, 2011), this basin has one of the strongest increasing trend according to the A2 scenario analysis obtained from RegCM3 regional climate model during the ten years periods (2011 – 2100). In this study, 2013 winter rainfall in the basin is highlighted and compared with the past and future rainfall conditions of the basin.