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## Space and Time Characteristics of Droughts in Kabul River Basin.

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Drought is a complex and less understandable natural phenomenon. Historical characteristics of droughts helps to understand the dynamics of the regional drought patterns. Numerous studies have predicted that the Chitral-Kabul River Basin (CKRB) is prone poses to serious threat due to global warming. This may endanger 10 million in habitants. The aim of this study is to revisit the characteristics of droughts in Kabul watershed, shared by Pakistan and Afghanistan. The monthly Standardized Precipitation-Evapotranspiration Index (SPEI) grided data (0.5° 0.5°) generated by climate research unit (CRU)version 4 has been used for study during the period 1901–2018. The four characteristics features i.e. Areal extend, Frequency, Duration and Severity has been studied on spatial and temporal scale. The results show that the Kabul Basin has experienced an increasing extent of severe drought between 1940 and 1960, which increased further after the year 2000. The frequency of drought events in the northern part of the basin is much higher than in the southern part of the basin. Whereas the duration of the drought shows a declining trend in the northern part of the basin. The southern and western parts of the basin experienced a growing trend in the severity drought. At the same time, the incidence of consecutive droughts in the Kabul River basin has also increased. This study suggests that dry conditions in Kabul river basin have been enhanced in recent years. Overall, this study confirms the importance of SPEI for assessing the effects of regional drought.

**Keywords: Drought analysis, Frequency, Severity, Duration, Kabul river basin**