

Rainfall and Temperature Characteristics of the Middle and Lower Awash Areas of Ethiopia

Authors : Melese Tadesse Morebo

Abstract : Pastoral and agro-pastoral communities in East Africa, particularly in Ethiopia, are vulnerable to climate-related risks. The aim of this study is to characterize the annual, seasonal, and monthly rainfall and temperature of the middle and lower awash areas of Ethiopia. Start of season (SOS), end of season (EOS), length of growing season (LGS), number of rainy days, and probability of dry spell occurrences were analyzed using INSTAT Plus (v3.7) software. Daily rainfall and temperature data for 33 years (1990-2022) from six stations were analyzed. The result of the study revealed that the annual rainfall in the study area as a whole showed an increasing trend, but its trend was statistically non-significant. During the study period, the Kiremt rainfall at Amibara station showed statistically significant increasing trends. The trend analysis of SOS, EOS, and LGS shows up and down trends at all stations. The mean lengths of growing seasons in the study area ranged from 20 to 61 days during the study period. In the study area, the annual mean maximum temperature ranged between 34.1°C and 38.3°C over the last three decades. All stations within the research area during the study period, the annual minimum temperature exhibited a substantial impact.

Keywords : annual rainfall, LGS, minimum temperature, Mann-Kendall test

Conference Title : ICAES 2024 : International Conference on Agriculture and Environmental Systems

Conference Location : Zurich, Switzerland

Conference Dates : September 16-17, 2024