
This study aimed to determine change in drought frequency and chance of drought occurrence over the coastal area of the Eden District, Western Cape. Drought is defined as a yearly rainfall total of less than 75% of the climatological year mean between 1979-2000. Following a validation process, two GCM models were used for the study, placing emphasis on the control and projected downscaled data for six stations located on the Eden District coastal plain. The methodology centred on statistical differences in downscaled data between two time periods of 1979-2000 and 2046-2065. The study found that drought frequency and probability is projected to decrease in the future. This is shown by comparing the number of drought years between two time periods with percent anomaly from mean graphs, as well as Probability Density Functions (PDFs) on the monthly rainfall totals. PDFs were calculated for each season to determine at when the biggest change in rainfall volume is projected to occur (between June and November) with large increases in mean rainfall and rainfall variance. This lowers the probability of drought occurrence due to increased rainfall amounts resulting from strengthened synoptic and small-scale conditions in future, which will in turn increase moisture content and moisture transport in the atmosphere over the study area. The amplified probability of these rain-producing conditions is projected to escalate rainfall amounts and curtail climatic conditions conducive to drought occurrence.