Abstract

This study attempts to reveal features of rainfall over Togo, in relationship to the prevailing atmospheric circulation. The study employed correlation analysis and composite analysis in the analysis of rainfall, sea surface temperature, wind, and humidity. Empirical orthogonal functions (EOF) analysis was employed in this study. The years: 1989, 1991, 1995, 2003 and 2007 were identified to be anomalously wet years while 1982, 1983, 1990, 1992, 2001 and 2006 fall in the anomalously dry years' category. The dominant mode of variability exhibits a dipole pattern, and explains 36% of the total variance. The rainfall was robustly correlated to Southern Atlantic Ocean Dipole (SAOD). The predominant wind flow over the country is westerly. Wet years were associated with anomalous low pressure area over Togo as opposed to the dry years which exhibited an anomalous high pressure area in the same region at low level. The results from this study provided basic climate information on Togo's rainfall. The SAOD can be further investigated of how it can be factored into seasonal rainfall forecasting over Togo. Accurate and timely rainfall forecasting will help to minimize the devastating impacts associated with anomalous rainfall in the region.