Abstract

Monsoon rainfall has significant impact on socioeconomic welfare of Myanmar. This calls for need to understand rainfall variability in order to minimize socioeconomic losses associated with extreme weather events. This study investigates the inter-annual variability of summer monsoon rainfall over Myanmar in relation to Indian Ocean Dipole (IOD) and El Niño-Southern Oscillation (ENSO).The dominant modes of variability of rainfall were identified by performing Empirical Orthogonal Function (EOF) analysis, using rainfall data from Global Precipitation Climatology Centre (GPCC) spanning from 1971 to 2010.The rainfall over Myanmar is negatively correlated with the positive phase of the IOD and positively correlated to the positive phase of the Southern Oscillation Index (SOI),implying that El Nino events result into drought events in the region, while La Nina events result into floods. The year 2001 was identified to be the wettest while 1972 is the driest period of study. The influence of SOI on rainfall over Myanmar is more than that of IOD. The moisture convergence characterizes circulation in wet years, while divergence is dominant during dry years. The findings of this study are important in improving the accuracy of seasonal forecast over Myanmar.