

# OCCURRENCES OF DROUGHT HAZARD IN THE NORTHERN REGION OF SRI LANKA

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## Abstract

Climatic hazards such as flood, drought, cyclone, lightning and thunder are the major challenges to Sri Lanka. According to the profile report of the Disaster Management Centre in Sri Lanka, from the last 24 years (1974-2008) flood (48.5%) and drought (44.6%) hazards are more prevalent. About 1/3 of the study area is belongs to the Dry zone of the country as results frequent occurrence of droughts have been experienced in this region. For examples the years of 1988, 1989, 1992, 2009 & 2012 were droughts. The objective of this study is to identify the annual and seasonal droughts and its severity. To study these objectives climatic data for the period of 1972- 2012 were collected from the Department of Meteorology, Colombo for following 13 stations (Akkarayankulam, Ambalapperumalkulam, Iranaimadhu, Thirunelveli, Kanukkerni, Karukkaikkulam, Murunkan, MuththaiyanKaddu, Nainathivu, Pavatkulam, Pallavarayankaddu, Vavuniya, and Vavunikkulam). To identify the drought years and seasons, rainfall data were analyzed by using the Standardized Precipitation Index (SPI). Based on SPI result, out of 42 years 5 years (1988, 1989, 1992, 2009 and 2012) are categorized as extreme drought years. Severe drought have been experienced (11 years) in 1976, 1981, 1986, 1987, 1994, 2002, 2005, 2008, 2009, 2010 and 2011. Maximum number of seasonal drought has been noticed during the South West Monsoon Season (13 seasons) compare with other seasons.

**Keywords:** *Northern Region, Drought years, Drought Seasons*

## 1. INTRODUCTION

Due to a slow evolution in time, drought is a phenomenon whose consequences take a significant amount of time with respect to its inceptions in order to be perceived by the socio economic system (Cancelliere et.al, 2006). Droughts are also common phenomena in dry zone of Sri Lanka. Drought occurrences have made

much impact in all the sectors of the economy of the dry zone areas of Sri Lanka. The Northern Region of Sri Lanka faces many threats due to the drought and flood frequently every year. Most of the areas of the Northern region face lack of drinking water problems during the South West Monsoon Season (SWMS) due to less rainfall in the months of June, July, August

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