



Water Scarcity, Food Insecurity and Drought Induced Displacement in an Arid Ecosystem: A Case Study in Indian Desert

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Indian Arid Ecosystem is characterised by scare as well as seasonal precipitation that have led to long term stress in a fragile ecosystem. In addition to this, over the years, Indian desert has experienced varying magnitude of drought, which have considerably influenced food and fodder production and led to the depletion of surface and ground water table. All these factors mean that the production potential of land is hardly sufficient to feed human as well as livestock population of the desert and this has led to extensive rural to urban migration in Indian Desert. In the present study, satellite data from Landsat TM, AWiFS, NOAA AVHRR have been used to detect the intensity and severity of drought condition, and data collected through primary survey has been used to measure the impact of water scarcity on food insecurity and drought induced migration. Rainfall trend analysis of the study area has been done with the help of Man Kendall Method to assess the meteorological vulnerability. In addition to these, NDVI, VCI, TCI, and VHI have also been used to find out the long term vegetation health in the study area. With the help of these scientific techniques, the paper focuses on the moisture deficiency during growing period and its effect on human population and livestock population.

Keywords: Arid Ecosystem, Indian Desert, Drought, Migration