

Estimation of spatial rainfall distribution using inverse distance weighting (IDW) in Parambikulam Aliyar sub-basin, Tamil Nadu

■ R. VINOTH KUMAR AND I. MUTHUCHAMY

Article Chronicle :

Received :
04.12.2014;

Accepted :
17.05.2015

Key Words :

Geographic information systems (GIS), Inverse distance weighting (IDW), Spatial interpolation, Annual and seasonal rainfall, Rainfall variability

ABSTRACT : The inverse distance weighting (IDW) method integrated with GIS was used to estimate the rainfall distribution in the Parambikulam-Aliyar sub-basin. The study was carried out based on 31 years of the monthly rainfall data from 8 rain gauge stations. Average annual rainfall of the region was found to be 1841.08 mm. The average annual rainfall of southwest, northeast, winter and summer monsoon was recorded as 1188.94, 430.89, 20.04 and 201.21 mm, respectively. The Chinnakallar rain-gauge station received the highest rainfall of 4750.25 mm whereas, Vettaikaranpudur recorded the lowest rainfall of 741.54 mm. The mean annual variability of rainfall was varied from 20 to 57 per cent. The south and south east part of the region experienced the heavy rainfall. East and north east received moderate rainfall, whereas the north, west and central part of the region experienced the lowest rainfall.

HOW TO CITE THIS ARTICLE : Kumar, R. Vinoth and Muthuchamy, I. (2015). Estimation of spatial rainfall distribution using inverse distance weighting (IDW) in Parambikulam Aliyar sub-basin, Tamil Nadu. *Asian J. Environ. Sci.*, **10**(1): 83-89.

Author for correspondence :

R. VINOTH KUMAR
Department of Soil and Water Conservation Engineering, Tamil Nadu Agricultural University, COIMBATORE (T.N.) INDIA
Email: kumar.nanthu@gmail.com

See end of the article for
Coopted authors'