

Identification of critical geo-morpho units using GIS – A study in a micro-watershed of Karamana River Basin

■ ASOK V. SMITHA AND V.S. SARANYA

Article Chronicle :

Received :
27.06.2015;
Accepted :
30.11.2015

ABSTRACT : The terrain characteristics of an area have an enormous impact on the natural environment as well as socio-economic activities. GIS based terrain models can provide a spatial element with the analysis of variables such as slope, aspect and watershed or catchment area. The present study aims to understand the terrain aspects of a small micro watershed of Karamana river with the perspective of water shed management in the area. This study was carried out using FOSS GIS to understand the basic principles and utility of this tool in identifying critical geo-morpho units in the area. Thus, compound terrain attributes such as L S factor, total curvature, convergence index and Terrain Ruggedness Index (TRI) were computed for the study area. It is hoped that the information provided in this work will be of use in implementing conservation and management strategies for the river systems of Kerala in general and the Karamana river in particular.

HOW TO CITE THIS ARTICLE : Smitha Asok, V. and Saranya, V.S. (2015). Identification of critical geo-morpho units using gis – A study in a micro-watershed of Karamana river Basin. *Asian J. Environ. Sci.*, **10**(2): 189-193.

Key Words :

Terrain modelling,
Geo-morpho units,
Watershed
management

Author for correspondence :

ASOK V. SMITHA
P.G. Department of
Environmental Sciences,
All Saints' College,
THIRUVANANTHAPURAM
(KERALA) INDIA
Email: [smithaasok@
gmail.com](mailto:smithaasok@gmail.com)