

Hydrological Modeling and Watershed Conservation Planning using Remote Sensing and GIS: A Case Study of Rongkhon Watershed Meghalaya

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Abstract

This study was carried out in a Rongkhon watershed of Meghalaya with objectives of estimation of soil erosion and surface runoff of Rongkhon watershed. Surface runoff was calculated using modified SCS curve number method and Soil erosion was estimated using modified Morgan Morgan Fenney model. As MMF model is based on process of soil erosion hence detachment limited and transport limited factors have been identified. In the present study effect of topography viz. slope, aspect and socioeconomic factor were also studied. The critical areas were identified and various agronomic and engineering conservation measures were proposed by using RS inputs in conjunction with spatial decision support system.