

- 1073. Patnaik, U.S. 1995.** Torrent research in Doon Valley. In: *Torrent Menace: Challenges and Opportunities* (Eds.) G.Sastry, V.N.Sharda, G.P.Juyal and J.S.Samra, CSWCRTI, Dehradun: 223-228.

In order to study the effects of variations in bed material and hydrologic geometry parameters along the torrent on their behaviour with respect to lateral migration, ten torrents including Bainkhala were selected in Doon Valley-five originating in the Himalayan foothills and flowing southwards to the Asan river and remaining five in the Shiwaliks flowing northwards to the Asan river. The data analysis on watershed characteristics has indicated that selected torrents in Doon Valley originated in the 800 to 1000 m elevation range (above m.s.l.). The Himalayan torrents are relatively longer (average 10.9 km) than those of Shiwalik torrents (average 6.5 km). The Shiwalik watersheds are more compact, more steeper and have well-defined drainage networks compared to those in the Himalayan foothills. The USDA-SCS Curve Number (CN) approach was chosen and the direct asymptotic determination method suggested by Hawkins (1990) was adopted for establishing rainfall-runoff relationships. It was found that the current asymptotic method of determination of the SCS Curve Number from storm rainfall and runoff depth was suitable for torrent watersheds with a predominant portion under forest land use. The CN value of 48.22 obtained in case of Bainkhala watershed may be used for computing the CN till better values/methods become available.