

- 1079.** Sastry, G., Sharda, V.N., Juyal, G.P. and Samra, J.S. 1995. Torrent Menace: Challenges and Opportunities, CSWCRTI, Dehradun: 350 p.

Torrents, the ephemeral mountain streams originating from the outer Himalayas and

Shiwaliks, cause extensive damage to life and property in the valley reaches as a result of frequent changes in their course due to meandering and lateral migration. The torrents are in fact downstream manifestation of the upstream causes. Over the years, several ameliorative measures have been adopted to tackle this gigantic problem following the concept of integrated watershed management which involves watershed treatment in the upstream areas as well as torrent training works in the downstream reaches. Although the torrent control programmes were initiated almost 50 years ago, scientific studies were actually undertaken by CSWCRTI, Dehradun in the early 1960s. Several State Organizations have also carried out extensive torrent control programmes involving bio-engineering measures. However, the scattered and piecemeal information on the package of technology is not readily available to the user agencies duly documented. In order to share the valuable information and experiences among various agencies and identify the reserach needs for better implementation of torrent control works, a workshop on "Torrent Menace:Challenges & Opportunities", first of its kind, was organized during May 7-8, 1994 at CSWCRTI, Research Centre, Chandigarh with the main objectives of quantifying the extent of torrent problem, technologies being adopted by various agencies and research tools available. This publication has emerged out of the deliberations and discussions among the participants in this workshop. It contains research and review papers on various aspects of torrent control in particular and watershed management in general.