The Chambal river is the largest tributary of the river Yamuna, which is one of the most important tributaries of the great river Ganga. The river Chambal flows through the Madhya Pradesh and Rajasthan States of the Indian Union. To harness its water for irrigation and hydroelectric power, an integrated network of hydraulic structures, known as the Chambal Complex, has been constructed as a joint venture between the States of Madhya Pradesh and Rajasthan. With the advent of the Chambal Complex, parts of the Command Area which lie in the Districts of Morena and Bhind of Madhya Pradesh have been subjected to severe problems like water-logging, headward erosion of the ravines in parts, bad quality of groundwaters, bursting of farmland grounds in the ravines due to high artesian pressures. Further there is paucity of canal waters to feed the farmlands lying at the tail-end reaches of the canal systems. To find solutions to these and such other problems, the author has taken up a part of the Chambal Command Area where they are acute, for study under the title "Hydrogeology of the area in the lower reaches of the Chambal Command of Bhind and Morena Districts, M.P."
The studies and the results obtained have been incorporated in eleven chapters. The first chapter is an introductory one, which is followed by a chapter on the physiography of the Chambal and Sind drainage-basins. The third chapter deals with hydrometeorological aspects with special reference to rainfall and its utility as a source for effective irrigation. The fourth chapter broadly throws light on the geological aspects of the Chambal and Sind drainage-basins in relation to the origin of Chambal alluvium. The fifth chapter is concerned mostly with the aquifers, their characteristics, geophysical well logging and related aspects. The sixth chapter brings out the occurrence and movement of groundwaters. The seventh chapter deals with the groundwater resources of the alluvium of the study area. The eighth chapter is on the quality of waters in the Chambal Command. The ninth chapter is concerned with the author's view of the origin of the alluvium. The tenth chapter embodies the problems of water-loggin in the Chambal Command and remedial measures. The eleventh chapter deals exclusively with the suitable groundwater exploitation methods for irrigation in the area under investigation. Finally, a summary and conclusions are given in the last.
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(L.P. CHOURASIA)