

# BOOK REVIEW

## **Water Resources of Western and Central Regions of India: Status, Issues and Strategies**

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One of the important events in the field of Geology especially Hydrology and Hydrogeology was jointly organized by Savitribai Phule Pune University, Pune and Geological Society of India, Bengaluru during 10th - 11th January 2019. The present event was associated with various brain storming sessions to pin-point the status, potentials, management issues and strategies, especially pertaining to the water resources of western and central regions of India covering the six major states, namely, Rajasthan, Gujarat, Maharashtra, Goa, Madhya Pradesh and Chattisgarh. All these states have unique set up of geology, geomorphology, climatic diversities in addition to the well established hydrological and hydrogeological characteristics. This brain storming event was jointly organized to brought out the above mentioned special volume - 12 (ix + 261 pages). This special volume has been grouped under the very explicit themes, defining i) Water resources of western and central regions of India: perspectives, ii) Resource potential and development and iii) Resource management and strategies: science and technology. The publication comprises in all 25 articles, covering mainly three themes.

The first theme encompasses the volumetric data on entire reserves of water resources of western and central regions of India, under which the three research papers have been published. This theme clearly brings out that "India is the largest user of surface and groundwater across the globe and hence the challenges are equally complex". Also, the schemes/policies to manage the both water resources should be site-specific because hydrological and hydrogeological set ups of the states like Rajasthan, Gujarat, Maharashtra, Goa, Madhya Pradesh and Chattisgarh are all together different. Hence, an integrated approach in the water resource management and their regulatory mechanism need to be given specific "vision" for the further future developments.

The second theme appears to be very comprehensive by including all the states of western and central regions of India and apprehends the surface and groundwater resource potential of the states covered by these regions of India. The data-base of surface water as well as groundwater resources are discussed in detail from the states of Maharashtra, Rajasthan, Madhya Pradesh, Chattisgarh as well as Goa with their unique hydrological and hydrogeological distinctiveness. Some research papers attract the viewer's attention for their particular orientation in degradation of water quality due to sea water intrusions at the sites of coastal Maharashtra; water crisis in Gujarat; ground water quality worsening in parts of Rajasthan

with emphasis on fluoride problems and the contamination potential of groundwater from Goa. In addition, the pragmatic approach of groundwater conservation and artificial recharge strategies in Madhya Pradesh has been very well dealt with! An overview of the data-base has also been supplied for the groundwater resources in some of the states as well as management issues and future strategies for sustainability have also been discussed in greater detail.

The third theme has been based on the induction of science and technological edge for the water resource management and the strategies implemented in western and central parts of India. "Water resource management in India: a peep through ages" is a plausible rendition on ancient water resource management systems in India. The two other papers are interesting and very specific in their core premise, i) groundwater management at the interface of an aquifer and the community and ii) a case study from upper Nira River Basin for delineation of phreatic basaltic aquifers. Besides, two research papers make us to apprehend the heap of data-base from two neighbours, Gujarat and Rajasthan. Herein, the subjects like groundwater scenario, issues and management strategies have been argued, and also highlighted the quality issues (salinity, nitrate, fluoride), cropped out from the arid and semi arid Rajasthan.

The authors have aptly tried to put their manuscripts very clearly with their research findings and field traverse recordings. This special volume accomplishes the integrated comprehensive outlook of hydrogeological settings of western and the central parts of India with immense data given through more than 140 figures and 110 tables. The authors' wide experience and the placing of the thematic approach for the research findings are the added merit of this special volume. I personally feel that this special volume is an ideal data-set for researchers, trainee hydrogeologists, NGOs and even the geo-scientists working in various organizations/institutions dealing with hydrology/ hydrogeology. I congratulate both the authors for their contribution in aptly combining the "treasure" of ground water resource data as well as the Geological Society of India, Bengaluru for bringing out this volume in very praise worthy form.

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