

Preface to the Second Edition


For human beings, water is not merely a substance that sustains life. Water management is an elemental ingredient in the way people conceive the world and an expression of their thoughts and emotions. Hydrologic knowledge in India has a historical footprint of several millenniums. As in many ancient civilisations across the world, the need to manage and use water drove the growth of hydrology in ancient India also. Evidences from ancient history provide an insight into the hydrological knowledge generated by Indians more than 5000 years ago. What is less known, however, is the rigorous discussion on several aspects of hydrologic processes in the ancient Indian scriptures as we understand them today.

This report reveals that the knowledge of hydrology was pervasive in ancient India starting from pre- Indus Valley Civilization days and has been discussed in-depth in Vedas, Puranas, Arthasastra, Astadhyayi, Vrhata Samhita, Ramayana, Mahabharat, Meghmala, Mayurchitraka, Jain and Buddhist and many other ancient literatures. However, it had remained unearthed and unexplored in front of the world at large till the recent times. This report, like its predecessor, is a sincere effort to present the ancient Indian hydrologic knowledge to the Indian and the world community. The report has a special importance, particularly in an era of population growth, environmental degradation and climate change leading to increasing hydrological extremes and stresses. The climate change phenomenon would also have greater impacts on water and food security. At the same time, the competition among various water sectors is increasing and thus requiring a larger emphasis on water resources management to achieve the goals of sustainable development (SDGs). The ancient water technologies discussed in this book should be considered not merely as historical artefacts, but as potential tools for sustainable water technologies for the present and the future.

While updating the report, a number of recent national as well as international research papers and technical book published by various national and international institutions have been referred. Figures illustrating various concepts, hydrological processes and water engineering techniques have also been included to clarify the concepts and help forming clear mental image of the developments. While revising, the title of the report has been slightly changed from “Hydrology in Ancient India” to “Hydrologic Knowledge in Ancient India”. I compliment the authors of the first edition of the report for their vision and efforts. I thank Dr. Suhas Khobragade, Scientist-F; Dr. P. K. Singh, Scientist-D; Dr. A. K. Lohani, Scientist-G; Md. Furqan Ullah, ALIO; and Mrs. Charu Pandey, LIA for their sincere efforts to update the report. In this report, material from various sources has been compiled. The sources and their contributors are duly and thankfully acknowledged.

A softcopy of the report and more information about the institute is available at www.nihroorkee.gov.in.

Roorkee, Dec. 01, 2018


(Sharad K Jain)
Director