## **Urban Lakes in India:**

Conservation, Management and Rejuvenation

Part-II

Editors

K.K.S. Bhatia

S.D. Khobragade

National Institute of Hydrology, Roorkee

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Dedicated to ......

All those who are working for the cause of lake conservation in India

## FOREWORD

Lakes are valuable natural resources. Since time immemorable they are not only being explored as dependable sources of fresh water for various domestic and other purposes, but have also acted as centres of civilizations. By supporting the various water for various purposes such as drinking water supply, irrigation, recreation, tourism, industrial and commercial water supply, lakes not only act as catalysts of development but play a significant role in the overall socio-economic development of a region. They are also important components of the nature's hydrological and ecological systems and as such maintain these balances.

With ever increasing population, the demand for freshwater conforming to desired quality for specific uses, is increasing. On the other hand, increasing developmental activities, industrialization, intensive agriculture etc. in the past few decades, have caused domestic, industrial and agricultural effluents, and waste waters to flow to the various water bodies as convenient natural options for disposal, causing their deterioration. A number of lakes in India particularly the urban lakes, with higher residence time and relatively lower self purifying capacity than rivers, are more vulnerable for such qualitative degradation. As such lake conservation and management has become one of the important aspects of modern day water resource planning and management.

Lakes have a history of research of more than a quarter and a century in India. However most of the lake related research in India is directed towards basic limnological processes and not much work has been done in the area of lake hydrology. Similarly, conservation and management of lakes as a science is still in its budding stage in India. It is expected that this book, which is one of the first publications on the subject in India, paves way for strengthening the development of the science of lake conservation, management and rejuvenation. The book throws light on the environmental problems being faced by some of the important lakes in India and hence, provides a bird's eye view of what is happening to the urban lakes in India. These volumes should also help the water managers in understanding the hydrological behaviour and environmental status of urban lakes and there by to plan various strategies and programmes to properly manage the lakes.

Recognizing the importance of the hydrological aspects of urban lakes and considering the serious problem being faced by number of urban lakes in the country and also the need for bringing together various researchers, engineers and managers responsible for providing good quality water in adequate quantity, a National Seminar on "Hydrological Aspects of Rejuvenation of Urban Lakes" is being organised by the National Institute of Hydrology, Roorkee jointly with the Maharana Pratap University of Agriculture and Technology in Udaipur, the Lake City of India during October 20-21, 2005. The proceedings of the national event are published in two parts. These books cover a wide range of technical papers on various themes including interesting case studies on some of the important lakes of India. It is earnestly hoped that these two volumes will go a long way for promoting integrated planning, development and management of lakes and help in evolving a holistic approach for conservation management and rejuvenation of India's urban lakes.

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Research is gratefully acknowledged. Without their financial support the dream of organization of this important event would never have been fulfilled.

The editors of these two volumes Dr. K.K.S. Bhatia and Shri S.D. Khobragade have worked with great dedication and sincerity to make the organisation of the national event a great success. Their efforts are greatly acknowledged. Prof. Virendra Kumar and Prof. R.C. Purohit of Maharana Pratap University of Agriculture and Technology have provided excellent support and their help is sincerely acknowledged.

Dated: October, 20, 2005 Udaipur K.D. SHARMA Director National Institute of Hydrology, Roorkee