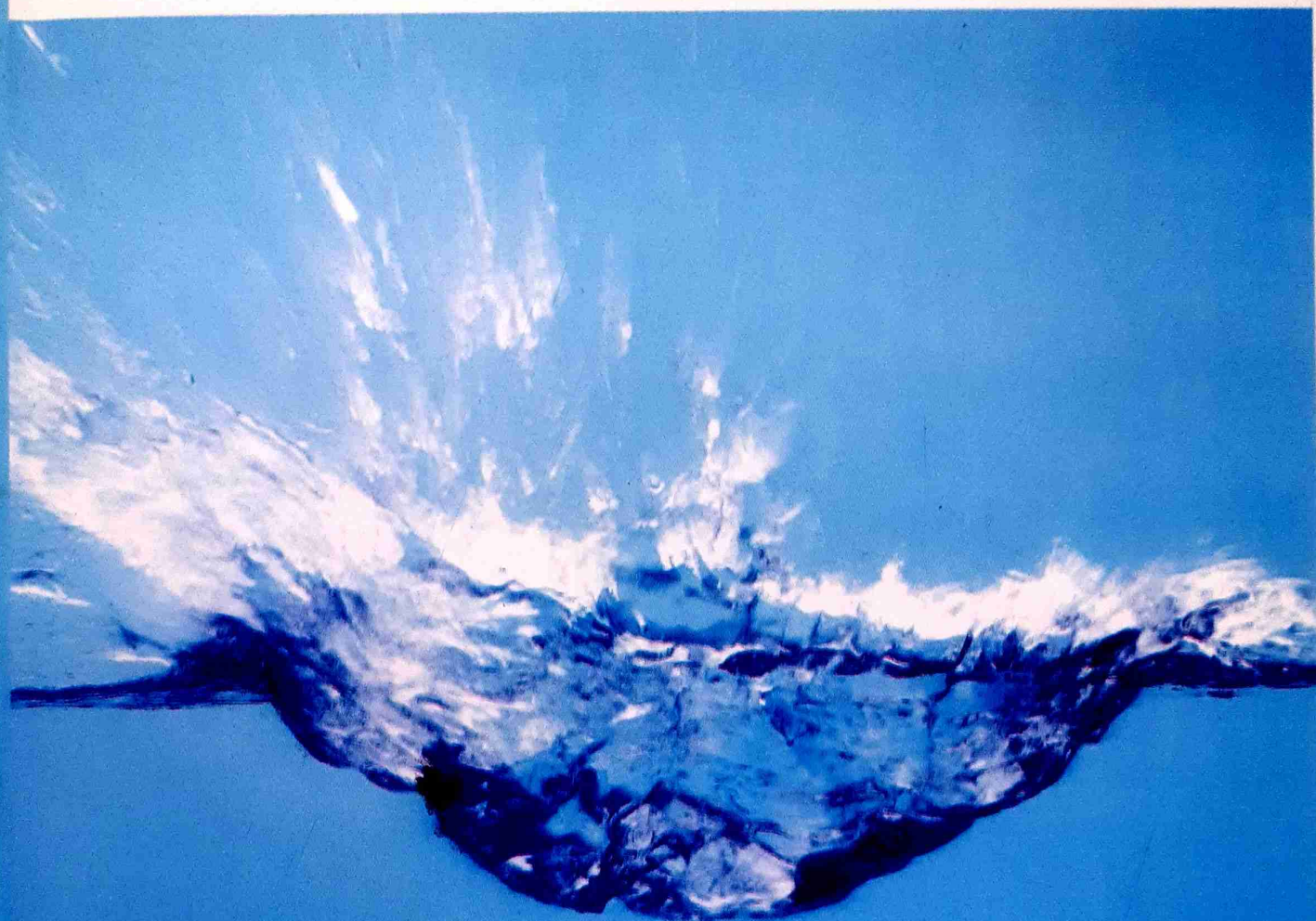


Governance Challenges Series

Volume 2



Sanitation and Health in Rural India

Problems and Management Options

edited by - **Alok Kumar & B.S.Bisht**



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Editor's Introduction

India is committed to provide water and sanitation to its people. Substantial progress has been achieved since the beginning of water supply in the 1960s and initiation of sanitation and hygiene education in the 1980s. India shares important characteristics that affect demand for and supply of water and sanitation services with other developing countries. These include various unfavorable conditions in terms of geology and remote locales, economic constraints and some long-standing traditions that affect hygiene and health behaviors and create particular burdens on the very poor.

Status of Water and Sanitation in Rural India—Interventions and Initiatives

Government of India's major intervention in water sector started in 1972-73 through Accelerated Rural Water Supply Programme (ARWSP) whereby States/UTs were assisted to accelerate the coverage of drinking water supply. Technology Mission on Drinking Water and Related Water Management, later rechristened as Rajiv Gandhi National Drinking Water Mission (RGNDWM), was launched in 1986. In 1999, with the formation of Department of Drinking Water Supply (DDWS), new initiatives in water sector were initiated through Sector Reform Project, later scaled up as *Swajaldhara* in 2002. The status of provision of water has improved gradually; about 26 % of rural population had access to an improved water source in 1981 which had more than doubled to 55.54% by 1991. As on 1.4.2007, Department of Drinking Water Supply, reported that 74.39% (11,21,366 habitations) are fully covered, while 14.64 % (2, 20,165 habitations) are partially covered. Further, present estimates show that out of 2.17 lakh water quality affected habitations as on April 2005, about 70,000 habitations have since been addressed for providing safe drinking water.

Similarly, Government of India encouraged construction of household toilets under Central Rural Sanitation Programme (CRSP)

in the 1980s. Subsequently, Total Sanitation Campaign (TSC) was introduced to increase toilet coverage and usages in rural areas in 1997. The success of TSC is evident from the fact that while in 1997-98 only 1.3 million toilets were built, toilet coverage has gradually increased from 6 million in 2003-04 to 9 million toilets in 2006-07 respectively. Substantial improvement in sanitation and hygiene promotion may be credited to the involvement of Panchayati Raj Institutions (PRIs), emphasis on IEC (Information, Education and Communication), strengthening Behavior Change Communication (BCC) and introduction of Nirmal Gram Puruskar (NGP) which has considerably motivated the community. The numbers of NGPs have shown exponential increase from 40 Panchayats getting the award in 2004-05 to over 700 in 2005-06. Over 30,000 PRIs have applied for NGP award in 2008. As an obvious result, India has seen a decline in diseases caused by unsafe water and poor hygiene.

An estimate based on the number of individual household toilets constructed under the TSC programme, puts the sanitation coverage in the country at about 49% as on November 2007. At present nearly 40 million households with 200 million Indians do not have access to proper sanitation. This results in approximately 1000 children below five-year dying every day due to diarrhoea alone. Lack of sanitation, inadequate and unsafe water and poor hygiene contribute to about 88% of diarrheal diseases. An estimated 180 million man-days equivalent to Rs 12 billion are lost every year due to sanitation related diseases.

About the Book

The adequate and safe water supply, sanitation coverage, solid and liquid waste management and hygiene promotion in India offer challenges and opportunities to government and non-government organizations. Concerted efforts are being undertaken to keep up the momentum to increase the coverage of toilets in households and institutions to achieve the target of "Open Defecation Free India by 2012". Measures are also being undertaken by the government to provide safe drinking water and basic civic amenities to the rural population of India.

This book is an independent and pioneering effort to assess the state of rural India's water, health and sanitation status. This book aims at helping the practitioners and policy planners (involved in water resource management, sanitation and solid and liquid waste management), and also to the users of these services including the

general reader. The book consists of success stories and case studies related to water and sanitation in India presented by the leading practitioners from various states of India, who have attempted to analyze the current status in rural India, draw inferences and present possible solutions.

It is in this perspective that the National Institute of Administrative Research (NIAR), Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, India, a premier institute with multiple objectives including initiation of research in various aspects of regulatory and developmental administration and converting the research outputs into training inputs for developing training software for various courses conducted by Government and Non-Government Agencies, decided to bring out this edited peer review book on *"Sanitation and Health in Rural India: Problems and Management Options"*.

The book has been divided into three parts namely, i) Water resource management, ii) Sanitation and Health, and iii) solid and liquid waste management.

Part 1: Water Resource Management—The first chapter by Dr. Mathew Kurian describes concept, approach and design principles for rural water supply projects. The Second chapter by Dr. Jaipal Singh, Madhavi Purohit describes the institutional experience on role of community in water resource planning and management in Gujarat. The Third Chapter by Er. Kireet Kumar, Sneha Joshi, Namrata Pant and Suman Joshi emphasizes the need of quantitative and qualitative assessment of water resources in the planning and management in a hilly terrain where water is available in abundance for dispersed population. The Fourth Chapter by Drs. B.P. Kothiyari and P.P. Dhyani provides information on quality, quantity and management aspects of water resources.

Part 2: Sanitation and Health—The first chapter by Mr. Benny George provides the review of Total Sanitation Campaign by covering the objectives, major features, financial aspects, institutional mechanism and Nirmal Gram Puruskar. The Second Chapter by Mr. Ishwar Bhai Patel brings out his experience of four decades on sanitation practices in Gujarat. Mr. Patel has included the major features of TSC programme in his article along with a case study on role of school sanitation and hygiene education in improving sanitation coverage in Gujarat. The Third Chapter by Ms Anjali Sain Gupta provides the details of

community led total sanitation and the change brought by this approach in achieving the sanitation target with emphasis on toilet usages. The Fourth Chapter by Dr. Parag Dubey and Ms Kalpana highlights the role of social marketing in improving sanitation status in Madhya Pradesh and introduces the framework for exercising the approach in any other community. The Fifth Chapter by Dr. Subrat Sharma brings out the status and challenges to current water and sanitation related programmes in the Himalayan States of India. In the Sixth Chapter, Dr. Uma Chawla deals with the importance of improved water and sanitation in reducing the water related infectious diseases in India. Ms. Rachna Gahilote Bisht in the Seventh Chapter describes the scenario in developing the correlation between health and sanitation in the development context in rural India. In the eighth chapter of this section, Mr. Alok Kumar, Drs. B.S. Bisht and Hashim Iqbal describe water supply and sanitation infrastructure and its impact on public health in rural India. In the ninth and last chapter the authors Mr. Alok Kumar, Dr. A.P. Singh and Mr. Sanjeev Sharma attempt to analyze the implementation of the Total Sanitation Campaign in various states in India.

Part 3: Solid and Liquid Waste Management – The First Chapter by Dr. Sam Godfrey, Dr. Pawan Labhasetwar and Dr. Satish Wate describe the importance of greywater treatment and reuse in meeting the ever increasing water scarcity. The chapter also includes a case study from Ashram schools of Madhya Pradesh where the greywater treatment and reuse systems are constructed. The Second Chapter by Dr. Jagdish C. Kuniyal, Mr. Sanjeev Kumar and Mr. Harinder K. Thakur describes solid waste management issues in the high altitude trekking regions of North-western Himalaya with a case of the Chandratal Lake. The Chapter also includes management options for the solid waste generated due to tourism activities in Himalayan region. In Third Chapter, Mr. Junaaid Ahmed Usmani describes the general principles of solid and liquid waste management in rural areas.

We earnestly feel that the present book, wherein almost all crucial aspects of health and sanitation in rural India have been addressed, will be of interest to policy makers, experts, specialists, academicians, researchers and shall benefit the students and observers of the initiatives in rural India, as well.

*Alok Kumar
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