

## Springs of Life - India's Water Resources

Ganesh Pangare, Vasudha Pangare and Binayak Das

Academic Foundation, 2006, 392 p., maps, tables and large number of photos, Rs. 695, Published by Academic Foundation, New Delhi, www. academicfoundation.com, Co., Publication Partners: World Water Institute and Bharathi Integrated Rural Development Society

*Springs of Life* tries to look at all issues related to water and its uses in the India. The authors have not only attempted this by going through the relevant literature and available statistics but by travelling more than 25,000 km across the length and breadth of the country, constantly interacting with the people, listening to their views and observations. Many of these experiences found their way into the book through hundreds of very meaningful, self-explaining, high quality photographs. These excellent pictures are mainly the contribution of Binayak Das, who together with Ganesh Pangare did most of the travelling, while Vasudha Pangare concentrated on the editing of the book

*Springs of Life* is divided into eight chapters, which are preceded by an "Overview" giving a brief introduction of what to expect in each chapter. The first chapter deals with "Water Resources". It first focuses on the river systems, lakes, wetlands and marine ecosystem, documented by relevant tables and then looks at the important questions of floods, droughts and climate change. The second chapter is concerned with "Water Supply and Sanitation". After shortly touching on the water sector development, this chapter focuses at rural water supply, sanitation, urban water supply as well as health and hygiene. Rural water supply discusses tradi-

tional systems for drinking water and domestic use by looking on water supply schemes and by pinpointing the specific difficulties of different regions, all well documented by photographs of neglected water systems, long waits for water, shortages in low and high rainfall areas and some successful schemes. The photographs on the women's water burden in Wanching in Nagaland are not often seen and show how they collect water with a ladle, put it into bamboo pipes and then carry half a dozen or more of these pipes up the hill to their settlement. Urban water availability, needs and supply are discussed next. Parched Chennai and Shillong's greater needs are among other problems discussed. Sanitation is another problem of rural areas where only 18 to 19 of the rural households have toilets, ranging from 10% in Orissa to 51% in Kerala as against 75 to 81% of all urban households. Poor water supply and sanitation severely affect health and hygiene not only through water borne diseases (shown in a table) but also in many other ways.

"Water for Agriculture" is the topic of the third chapter. After briefly showing the agroclimatic regions of India this chapter focuses on the traditional irrigation systems, as practised in Arunachal Pradesh or Ladakh, tank, canal, and groundwater irrigation. The discussion then elaborates on the development in the irrigation sector and some

of the accompanying problems and the need for watershed management. Many tables accompany this chapter.

The fourth chapter “Water at Risk” discusses the decline in the quality of water, the contamination of the ground and surface water by natural and human induced pollutions. Stress is laid on the health risk of natural pollutants like arsenic, fluoride and iron, which have become more severe with the over-utilisation of groundwater and proposes some remedial devices and technologies. The major part of this chapter is, however, concerned with the man-made pollution caused by domestic waste, fertilisers, pesticides and industrial effluents giving regional examples, and an all India water pollution map and useful tables. The fifth chapter is evaluating the role of “Water Markets and Privatisation”, questioning the present tariff structure of irrigation, domestic and industrial water pricing and the lack of transparency underlining the need of taking the consumers into confidence and providing effective regulations.

The following two chapters deal with “Water Conflicts” and “Water Actions”. The constantly increasing demands by different users be it for irrigation, industries, energy production or domestic needs lead to conflicts at different levels. The conflicts may be quarrels at the village level between richer and poorer farmers, divergent rural urban demands, varying rural industrial interests or interstate disputes. Frustration often arises when water sources dry up, the supply fails or polluted water is only available. Elaborating on each of these conflicts the authors underline that comprehensive policy reforms and regulations are re-

quired to reduce wastage, conserve water and to minimise disputes. The authors would like that water conservation, watershed development and equitable distribution of water resources would be managed by local communities as demonstrated by some very successful community schemes or at least in partnership with NGOs and government departments.

The last chapter “Water Voices” is some kind of annex in which personalities from different fields of life voice in short articles their perception, concern and understanding about water. They reflect personal experiences and thoughts and some of them suggest management strategies.

*Springs of Life* is a rare combination of an academic endeavour and a coffee table presentation - “a crossover book”. The getup, the many coloured photographs, the boxes highlighting certain problems, the articles of the last chapter belong more to the coffee table style, while the clear language and logical presentation, the detailed tables and maps represent the academic side. Such a crossover book has the advantage to stimulate the interest of students and general readers into the many questions related to water management, use and problems in India, and may motivate them to more serious readings on particular topics. The book printed on glossy paper priced, is well edited. Considering the size of the book and the quality printing, the price of Rs. 695.00 is very reasonable. The book should be very useful to a large circle of readers.

***Jutta K Dikshit***