

## Book Review

### **Pricing Irrigation Water: Principles and Cases from Developing Countries**

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There is growing realization that water is likely to be one of the most critical resource issues in the first half of the 21st century. Especially important in this context is the case of irrigation water in developing countries. As the authors of this volume point out, based on a World Bank (2001, p. 1) report, ‘irrigated agriculture in developing countries consumes between 75% and 90% of all water used and contributes about 38% of the world’s food’.

The book has a total of 11 chapters, the first six of which consist of an introduction, a literature survey, a discussion of the conceptual/theoretical issues underlying water pricing, micro- and macro-economic analysis of pricing in several developing countries (two chapters), and a discussion of policy implications. The remaining chapters (7–11) are devoted to cases of water pricing in five developing countries: Morocco, China, Mexico, South Africa and Turkey. As is typical of a multi-authored volume, there are also quality variations in this book among individual chapters in terms of clarity of coverage, depth of discussion and rigor of analysis.

The introductory chapter on the need for effective pricing is more in the nature of a summary of the book chapters rather than a rigorous discussion and analysis of the rationale for instituting irrigation water pricing. The demand for irrigation water is likely to become an issue of grave concern in the years to come for a number of reasons: increasing competition for existing water supplies; decreasing quantities of undeveloped water sources; growing demands for water transfer from agriculture to urban and environmental uses; competing water demands among uses and users, and the consequent proliferation of conflicts among multiple stakeholders; the need for revamping archaic water laws and institutions (Gopalakrishnan *et al.*, 2005); growing concerns about water quality problems; and the pervasive concern for water conservation (Gopalakrishnan, 2000). Issues associated with water pricing, the topic of the volume in review, are therefore of compelling importance in the context of optimal water resource management in the new millennium (World Commission on Water for the 21st Century, 2000; Biswas, 2005). Unfortunately, there is very little discussion in this chapter of the factors noted above in making irrigation water pricing an issue of critical concern to developing countries. Such a discussion and analysis based on empirical data from diverse sources would have significantly enhanced the value of this chapter.

Chapter 2 provides a comprehensive and well-researched literature survey on the multiple dimensions of water pricing and is one of the best chapters. The careful summary of case studies included as an appendix in this chapter is a noteworthy contribution to the literature on water pricing. Chapter 3 presents succinctly the economic principles underlying irrigation water demand and supply. Chapters 4 and 5, which deal with microeconomic — and macroeconomic — analysis of pricing, respectively, present good discussions drawing on empirical evidence from developing countries, although Chapter 5 is limited solely to irrigated agriculture in Morocco. Graduate students in water economics and policy will find these chapters especially useful in terms of the application of theory to real-world settings, as most of the current textbooks on water economics are long on theory and short on empirical analysis based on actual field data. Chapter 6 on policy implications is a good summary of the analytical findings from the cases that follow, although no particularly illuminating analysis of the ‘policy implications’ informs this chapter and is thus somewhat limited.

Chapters 7–11, which are purportedly detailed discussions or case studies of irrigation water pricing in different developing countries, constitute the weakest section in this volume. These chapters, based on unpublished World Bank case studies, while useful overviews of water sectors in those countries, include a very sketchy discussion on water pricing per se and shed little light on the theory, practice and policy implications of water pricing currently in place. For example, Chapter 8 has about two pages devoted to water pricing in a 17-page discussion. This is true of other chapters as well, where very brief descriptions of water pricing are presented, with little or no analysis of how these disparate pricing schemes measure up in terms of the framework the authors have developed for water pricing in this volume. This is a serious limitation of this book that detracts from realizing the full benefits of the model proposed by the authors. Incidentally, the exclusion of India from the country cases has diminished the balance and diversity the authors state that they have tried to ensure in the selection of countries, especially since China is one of the countries included.

Notwithstanding these limitations, this book makes an excellent contribution to the relatively sparse literature on irrigation water pricing in developing countries. The authors, all with extensive experience in developing country water problems, have brought to bear their expertise and insights in fashioning this highly accessible volume. This book is a particularly useful contribution to water professionals in designing and implementing research projects on water pricing in developing countries.

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## References

- Biswas, A.K. (2005) Editorial, *Water Resources Development*, 21, pp. 3–8.
- Gopalakrishnan, C. (2000) Water and agriculture in the American West, *Water Resources Development*, 16, pp. 173–175.
- Gopalakrishnan, C., Tortajada, C. & Biswas, A. K. (Eds) (2005) *Water Institutions: Policies, Performance, and Prospects* (Berlin: Springer).
- World Bank (2001) *World Development Report 2000/2001: Attacking Poverty* (Washington, DC, World Bank and New York, Oxford University Press).
- World Commission on Water for the 21st Century (2000) *A Water Secure World Vision for Water, Life, and the Environment* (Marseilles: World Water Council).