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Book Review

Ronald C. Griffin, Water Resource Economics: The Analysis of Scarcity, Policies and Projects, second ed., The MIT Press, Cambridge, MA, USA, 2016, p. 496

The second edition of Ron Griffin's Water Resource Economics comes 10 years after the first edition was published by MIT Press. It is a tribute to the prescience of the first edition. Despite a great deal of change in the 'water world' over the past decade, the material in the first edition still provides the core of the second edition. Nevertheless, some important additions in the latest edition include a chapter on Risk and Reliability along with new sections in the chapter on Water Marketing such as on the Murray-Darling Basin (with WRE editorial board member Sarah Wheeler) and a revised and expanded section on water marketing in California.

The book is written so that an intelligent and motivated non-economist can read and understand it. While for economists this may make the first three chapters redundant, the remaining 10 chapters are of high value to non-economists and economists alike. Chapter 4 on Risk and Reliability provides practical applications about how to apply risk concepts and, using a simple example, shows how to calculate an option price and an option value. It also includes a useful section on robust decision making. In the next edition, and within this chapter, it would be nice to include a section on Bayesian networks and causal risk analysis.

Chapter 5 on social institutions and Chapter 6 on policy analysis are masterful in their treatment of issues which are typically given limited attention by economists, but are critical to resolving the complex problems of sustainable water resources management. Key highlights include Section 6.4 on price rationing and Section 6.5 on quantity rationing which, combined, set out very clearly and concisely the challenges, the welfare losses and distributional aspects of who wins and loses as a result of water rationing. If only water utilities and regulators both read and paid attention to what is written in these sections!

Chapter 7 on cost-benefit analysis is a useful 'how to' guide and its appendix on cost allocation is a nice addition with a helpful concrete example. Given the increasing global attention to the use of water markets to respond to water insecurity, the updated Chapter 8 on water marketing will be very welcome from both students and practitioners alike. It explains how water markets work and does not shy away from exploring the complexities needed to comprehend the challenges of establishing them. Chapter 9 on water pricing covers all the key topics in terms of rate structures and rate settings. Chapters 10–12 encompass the core topics of water demand, water supply and modelling demand and supply. Collectively, these three chapters provide one of the best expositions on the topic available anywhere and are ideal for anyone wanting to know the fundamentals of demand and supply, and not just from the perspective of water resources. The book concludes in Chapter 13 with an excellent review of what matters in terms of economic principles and provides a great checklist for all decision makers who want to make a difference in water resources management.

In my view the book is an absolute 'must have' for anyone interested in water resources management, be it economist or non-economist, and who wishes to understand and to resolve complex water resources problems. I use it with my students in a Masters level course that includes a core water component. I only wish there were a comparable book to guide my students on the other topics that I teach. In sum, it is an outstanding text that is a pleasure to read and accomplishes what few books are able to achieve, namely, to link economic theory to application and best practice.

R. Quentin Grafton
Crawford School of Public Policy, The Australian National University, Building 132 Lennox Crossing, Canberra, ACT 2601, Australia
E-mail address: Quentin.grafton@anu.edu.au

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