The Australian Journal of Agricultural and Resource Economics
Journal of the Australian Agricultural and Resource Economics Society

The Economics of Natural and Unnatural Disasters, edited by William Kern. Published by W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan, 2010, pp. v + 143, ISBN-978-0-88099-362-3 (pbk), $15.00.

The recent extreme natural disaster events (the floods and cyclones in Australia and earthquakes in New Zealand and Japan) and associated policy responses must have many in the agricultural and resource economics profession thinking they might have something useful to say about how natural disasters could be managed. After all, the management of uncertain natural systems and associated markets is core business for the profession. However, researchers focused on rural issues may not be familiar with the literature on the economics of disasters as it focuses primarily on residential areas. The *Economics of Natural and Unnatural Disasters* is a collection of five papers with an introduction by the editor William Kern. For a relatively short book (143 pages), it does a good job of illustrating the diversity of research issues and angles covered by research on disaster economics in the last few decades. In terms of subject matter, it is predominantly United States-based and focused on natural disasters: flooding, hurricanes and tornadoes, but touches on climate change and on man-made disasters such as terrorism.

William Kern's introduction identifies some of the enduring themes of disaster research including understanding what influences how well people prepare and respond to disasters, how to evaluate disasters and disaster management, and the design of government policy.

Chapter 2 (by Howard Kunreuther and Erwann Michel-Kerjan) provides the introductory story: worldwide, there have been multiple disasters in the last decade, where the loss of human live can be measured in hundreds of thousands. Damage costs from disasters have grown dramatically in recent decades and are often measured in hundreds of billions of dollars per year and tens of billions of dollars per event. Much of this increase can be attributed to increasing concentration of human population and value of property. It is debated whether things are getting worse with climate change and whether much of the damage may be preventable. After setting the scene, chapter 2 moves on to argue for the merits of long-term insurance contracts. The analysis illustrates the importance of imperfections in human decision-making about disaster management for policy design. However, the argument for long-term insurance is often not clearly laid out and as a result not convincing.

The central theme of chapter 3 (by Anthony Yezer) is the importance of expectations about disasters. Because disasters are large and infrequent, they can change expectations, and this has numerous implications for policy. Along the way, the chapter provides a valuable synopsis of how the theory and practice of disaster policy in the US has progressed over time. A key theme is the importance of interactions between disasters and land markets. Urban land derives much of its value from features of the surrounding area, which can be changed by disasters. Yezer argues that these externality effects on land values are important in understanding the response of owners to disasters and related policies, such as compulsory insurance.

Chapter 4 (by Hal Cochrane) provides a retrospect of the field, and as such, it covers vast territory very quickly but pauses to make some useful points. Highlights for me were a simple approach to the complex problem of the economics of information and disasters, and a discussion of the nuanced ways in which circumstances can influence the impact of disasters on regional economic activity. It provides a compelling case that standard input–output or CGE approaches will not capture the effects of disasters on regional economic activity.

Boettke and Smith examine the recovery from Katrina in Chapter 5 and look at the role of markets, civil society and government in responding to natural disasters. Their main conclusion: governments are as likely to be a hindrance as a help. I find this dogmatic and not particularly useful in defining the role of government in disaster policy. However, their analysis points to a range of issues that must be considered in designing sensible policy. Economists since John Stuart Mill have noted how impressively areas can spring back from disasters. Key assets critical for recovery are apparently not physical, but the knowledge of how to recover and the ability to coordinate this know-how. Civil society and markets appear to be important in ensuring this coordination. The huge volunteer clean-up effort after the Brisbane floods springs to mind. Boettke and Smith argue that after Katrina, large companies such as Wal-Mart and Home Depot provided critical early responses, and as first movers, effectively provided leadership and coordinated expectations that an area would be resettled, encouraging others to return. How to improve and integrate central and decentralised coordination during the different phases of disasters surely requires economic analysis. Ensuring that governments support rather than degrade the goodwill that underpins a coordinated response may also require more than platitudes.

Building the case against conventional government policies, Boettke and Smith look at the reasons for the collapse of the levee system in New Orleans. They claim a corrupt levee board was the primary reason for failure. I would like to have seen a more careful analysis. The story could have been richer and had more to teach about how incentives should inform institutional design. For example, I refer the reader to the publically available account by Ray Seeds on an independent investigation into the levee failure: http://www.lasce.org/documents/RaySeedsLetter.pdf).

Boettke and Smith assume that the extent of recovery and rebuilding in previous locations is a useful measure of effective recovery. For New Orleans, and perhaps other disaster-prone areas, this may not be the case. Many people moved and, perhaps sensibly, stayed away. The question of how we should evaluate the costs and benefits associated with disasters seems to be an overlooked but important and interesting research area. For instance, how should we deal with the issues that people's behaviour and evaluations may be changed by a disaster?

Finally, in chapter 6, Sutter and Simmons' study of tornadoes provides a nice demonstration of the value of careful applied economic analysis on disasters. One finding is that tornadoes are more lethal after dark. The reasons why this is the case will determine the appropriate policy response. Useful.

Collectively, the chapters highlight that economic analysis of disasters has important implications for government policy and that there are still important questions to be resolved. The concepts for analysing uncertain natural system, such as moral hazard, with which agricultural and resource economists are familiar, provide the foundation for an analysis. However, this book introduces other factors that need to be considered, such as how real people and markets respond to the risk of disasters and associated policies, the links between disasters and urban land markets, and the regional economic context. Messier issues such as the complex institutional issues raised by urban planning and zoning systems, and the confounding uncertainty of climate change are not fully addressed, but the approaches described in this book provide a good starting point.

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The End of Abundance: Economic Solutions to Water Scarcity, by David Zetland. Published by Aguanomics Press, California, USA, 2011, pp. xiv + 294, ISBN 9780615469737 (pbk), $20.

Zetland's *The End of Abundance* sets a precedent for making water economics entertaining. This engaging book covers a wide range of water management issues in the developed and developing world. The author uses straightforward language to make the economics behind water scarcity accessible to the general public. The book is divided broadly into two parts. The first part helps readers understand the individual decisions on water use and supply leading to problems of scarcity, the role of inappropriate pricing in generating this problem, and also how correct pricing can solve it. The second part considers the bigger picture of public choice, where decisions on water provision and allocation made on behalf of the public are subject to principal–agent relationships. The author suggests pragmatic solutions through the lenses of economic theory, using simple terms to convince the public of why it is 'the end of abundance' and the necessity of demand-side solutions to improve water efficiency in the new era. Having highlighted the political dimensions of water provision, Zetland makes a compelling case for greater reliance on markets to ensure the most efficient distribution of water to those who value it the most.