Review: The Hidden Costs of Coastal Hazards; Implications for Risk Assessment and Mitigation

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H. John Heinz III Center for Science, Economics, and the Environment. *The Hidden Costs of Coastal Hazards: Implications for Risk Assessment and Mitigation*. Washington, DC: Island Press, 2000. 220 pp. ISBN 1-55963-756-0 (paper). US $30.00

On September 22, 1989, my wife and I were eastbound on Amtrak's Empire Builder, enjoying a relaxing ride through Montana and North Dakota. As we were reflecting on our just completed vacation in Glacier National Park, Hurricane Hugo was laying waste to a large portion of South Carolina. But it was not until I returned home to Northeast Columbia two days later that I saw the details the news reports could only allude to. Columbia is 183 kilometers inland from Charleston, scene of the most publicized effects of Hugo, yet the destruction for many of us east of town was significant.

Reading *The Hidden Costs of Coastal Disasters* brought back many memories and at the same time filled a void. I expect that most people who have experienced a major, wide-spread disaster are left believing the official damage estimates greatly understate the actual costs.

The *Hidden Costs of Coastal Disasters* documents the results of a study funded and managed by The H. John Heinz III Center for Science, Economics and the Environment. One of the founding hypotheses of the study is that all major disasters carry both reported and unreported costs. The reported costs may be the smaller of the two, and the unreported costs are typically difficult to quantify. The study asserts that sometimes it is the nature of the impacts that they cannot be easily described in terms of dollar value, but many times it is simply that adequate reporting mechanisms are not in place to gather the needed data. The Heinz study sought to re-characterize coastal disasters in a more comprehensive manner, to thoroughly document unstated costs, and to suggest ways that mitigation strategies can be developed and implemented by local communities and governments.

The first chapter provides context for the remainder of the book. The concept of "hidden costs" is introduced and distinguished from reported costs, financial and other impacts are summarized, the human and natural landscapes are characterized, and the current insurance and regulatory/non-

regulatory policy environments are described.

The book is not confined to a study of Hurricane Hugo, but that event is used to build a framework for discussing the broader topic. The second chapter of the book describes in some detail the effects of Hugo. The framework divides impacts into four categories: (1) the built environment; (2) the business environment; (3) the social environment, and; (4) the natural environment. These categories form the organization for discussion throughout the remainder of the book.

The third chapter discusses each of the four categories in detail, including what potential costs are incurred, which costs are reported and which are hidden, and sources of data from which damage assessments can be attempted. This chapter is exhaustive, including summaries of direct versus indirect costs, who pays, consideration of offsite costs, and immediate versus longer-term costs. The most revealing and interesting are the three sections on the business, social, and natural environments. These categories carry essentially all of the hidden costs burden and are typically given the lightest treatment, if any, in financial impact summaries.

The final three chapters cover risk assessment, mitigation strategies, and community planning. Here the study moves significantly beyond the core problem of a full cost accounting of coastal hazards. With these new insights, new dimension and depth are available to longstanding practices followed by analysts, policymakers, and community leaders. This portion of the book may be its' most valuable contribution in the long term, but in the near term the ideas and proposals presented here are more likely topics for future research.

Chapters 3-6 end with several conclusions and recommendations that summarize and suggest ways of implementing the findings. Some are quite specific; others are more general. Many will require the affected organizations to rethink their approach to disaster mitigation planning.

Near the beginning of the book the study authors sound the optimistic note that a paradigm shift is in progress in this country with respect to understanding and planning for the full effects of disasters. As human civilization inhabits and modifies greater amounts of the natural environment with more people and expensive structures, simple probability dictates that disaster costs will continue to rise unless determined action is taken to mitigate them. Optimism notwithstanding, the hurdles to achieving this are enormous. The study described in this book is, we can hope, a significant step in that direction.

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