

The chapters in the book are uneven: there is hardly any connection, conceptual or otherwise, among the three parts of the book or among single chapters within each part. Many of the chapters do not have concluding sections or summaries. The major contribution of this book is its emphasis on culture and social systems, which guided hydraulic civilizations of the Mediterranean for many generations.

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WATER AND THE CITY – RISK RESILIENCE AND PLANNING FOR A SUSTAINABLE FUTURE, by Iain White. Oxon, UK: Routledge, 2010.

Whether it is New York City or New Orleans threatened by hurricane floods, Karachi or Brisbane under heavy monsoon rains or Mogadishu under continuous drought, it is clear that cities are affected by extreme weather events and that water, both too much and too little, have significant impacts on the livability and sustainability of urbanites.

At the beginning of the 21<sup>st</sup> century cities are becoming the dominant form of human settlement. According to the United Nations, more than 50% of the world's population are urbanites, a proportion expected to grow to as high as 70% within the next two decades. The integration of growing urban populations with increasing processes of environmental change and extreme weather events means it is essential to examine existing perceptions on urban resiliency and sustainability management.

Iain White's book, *Water and the City – Risk Resilience and Planning for a Sustainable Future* presents and analyses the complex interactions between human settlements and extreme weather events leading to flooding or drought. It then explores the potential contribution of planning to reducing risk and increasing urban resiliency.

The call for an integrative comprehensive approach to water management presented in the book should be of interest to geographers, planners and other practitioners and scholars working on urban sustainability issues. One of White's claims has been part of the science of geography for generations; he writes: "A long term view would be [...] to gradually adapt the city to be more sensitive to its geography [...] Not one solely determined by socio-economic factors, but also its local geographical, climatic and environmental constraints" (p.182). Furthermore, while the book focuses on water, I believe that the same linkages and approach presented here can and should be relevant to other aspects of urban sustainability – e.g., food, energy, waste, etc.

Water and its management have been part of human settlement development ever since the emergence of cities thousands of years ago. Both the availability of

water (for drinking and agriculture) and the results of extreme events (flooding and drought) influenced social and political decisions on settlement location, function, and preparation for extreme events. Water management has played an important role in the modern planning profession since the 19<sup>th</sup> century when serious efforts were undertaken for the provision of clean water, safe disposal of sewage and prevention of extreme weather events.

White's book is divided into four main sections: the past, present and future contexts; the problem of water in the city; towards a conceptual framework; and planning for a sustainable future. Each section contributes to the author's main contention that the risk of flooding or water scarcity is partially the result of historical development paths and governance processes, and the magnitude of these threats in the coming years will depend upon the way we act now and in the near future. The first section gives the broad context and background to the author's arguments that urban sustainability issues of the future will reflect the planning approach we take today. In that section of the book, water is discussed as one issue among several complex local and global sustainability issues (e.g., urbanism, population growth). One of the main water-related ideas acknowledged in this section is the need for a conceptual shift from viewing water-related disasters as natural events to events that have human social drivers. This acknowledgment at the outset of the book helps the author to argue in the following sections for an expanded water management system that includes social, political and institutional considerations.

After laying down the broad context, the author uses the second section to describe the problems of water and the city. He illustrates the two extremes – too much and too little water in the city – and analyses different types and drivers of extreme events. Interesting examples are the flooding in the UK greater Manchester area of 2004, or the UK 2005 Carlisle flooding and drought in the U.S Las-Vegas area and the U.K Murray-Darling Basin. These examples support his arguments in the following sections, for planning approaches that expand beyond technical measures.

The third section reveals the most interesting and innovative aspect of this book. White takes several important steps to developing a conceptual framework for exploring urban sustainability, a framework that is then applied to sustainable urban water management in the fourth section. White's framework uses the concepts of risk, resiliency and vulnerability to illustrate the complexity of water and city linkages and as a way to conceive of more sustainable management of those linkages.

As a planning scholar, White sees the planning profession as critical to the future path global human action will take, and he aims to stimulate a debate on the potential contribution of spatial planning to development of more resilient cities. He claims that the dominant approach of modern planning to water issues has been too technical, with policy makers assuming that by implementing and investing in engineering solution, cities can sustain themselves. Indeed that technical approach has been very successful in contributing to urban livability and sustainability for over a century. However, as argued by White and illustrated throughout the book, this ap-

proach may be too narrow and possibly not sustainable in a rapidly changing urban world. Unlike the mainstream planning approach, which focuses on such measures as land use and urban design, White argues for a much broader approach. Such an approach would address social and political preparedness for extreme events, looking beyond technical, engineered measures to the resiliency of institutions and the public. He calls for the need to develop management systems which will help planners as well as the general public to better recognize their vulnerability to extreme water events. Following his critique on current management systems he suggests and illustrates the benefits of a new, different city water management system. According to White the system should move from focusing on probability, defense, and supply issues to focusing on risk management, demand side management and spatial planning to increase urban resiliency to extreme events.

Despite or perhaps because of the comprehensive approach the author takes on the water and city linkages, it seems to me that while trying to cover both aspects – flooding and scarcity - White is most successful with the first. Most of the examples and recommendations for new measures are related to flooding and mostly in the case of the United Kingdom (the author's country and work environment). While I did find many of the arguments raised and measures suggested relevant to cities under water shortages, there are several differences between flooding and drought which are not addressed. Perhaps the book would have benefited from acknowledging the differences and then focusing only on flooding.

Furthermore, while I find the author's attempt to develop a new conceptual framework important and useful I hoped to see more concrete examples of the way such an approach might be implemented; in particular how it might be implemented in the developing world where most current urbanization processes are occurring.

Finally, as highlighted earlier in this review, while indeed the book aims to focus on urban water management issues, I believe the broader conceptual and theoretical approach developed here - one that looks at the city from a risk management, resiliency and sustainability is relevant to other urban issues as well. It follows that such planning approach might be relevant to other urban sustainability components including food, energy, and waste; to their interactions with each other; their interactions with water management, and their influence on overall urban sustainability. It implies that further development of the framework suggested in this book and examples of its applications to a range of urban components, possibly in a variety of international contexts, would be a fruitful next step.

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