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LOSING PARADISE: THE WATER CRISIS IN THE MEDITERRANEAN, Edited by Gail Holst-Warhaft and Tammo Steenhuis. Farnham, Surrey: Ashgate, 2010.

This book's declared goal is to present "an integrated approach to the crisis of water scarcity in the Mediterranean". This crisis is reflected in a reality in which twenty million people on its southern and eastern sides (within the developing realm of the Mediterranean) have no access to drinking water. Only 55% of the coastal cities have sewage facilities, thus polluting scarce fresh water resources and the Mediterranean Sea together. This fact indicates the core of the problem: human failure to manage the scarce resources, particularly water, in a sustainable manner.

This edited volume is an outcome of a conference that took place in Greece in 2000 and focused on the severe water stress in Greece. Like other edited volumes resulting from conferences the book is a somewhat eclectic assemblage of papers, roughly divided into 3 parts: first, cultural background to water resource management and two additional parts dealing with water resources and conflicts and some aspects of sustainable and non-sustainable use of water resources.

In my view, the first part of the book, which explores the cultural background to water resources management, is the most fascinating and, perhaps, the most innovative contribution of the volume, because it presents themes that are rarely dealt with among water-resources researchers.

The first chapter, (the best chapter of the book), draws on a rich variety of sources, from the Nile floods of Egypt to Biblical, Christian and Islamic traditions and beliefs. It also presents the sanctity and centrality of water resources in the ancient civilizations of the Mediterranean. One important difference in the cultures of the north and south of the Mediterranean is the relationship between land and water. In the north, especially the north west of the Mediterranean, land meant power. In

the south and east, water was more important than land and was often sold together with it.

Also, Wittfogels 1957's depiction of Hydraulic Societies (Egypt and Mesopotamia) as despotic was discredited by later scholars, who demonstrated that irrigation systems were more commonly the work of individual local farmers.

The context of the Mediterranean region, the imagined Mediterranean and Mediterraneanity (defined as the living culture of the Mediterranean) are discussed by Holst-Warhaft as the research turf of the book. Students of the Mediterranean generally are reluctant to select the entire region as a field of study, one explanation being that it disrupts the actual changes in the region, partly due to different approaches to the writing of history. This is in contradiction to Braudel's eloquent and magnificent Mediterranean history and geography. A different approach was adopted by historical ecologists (Horden, Purcell), an approach that takes into account the small and particular geographies. The enormous variety of micro-environments of the region stresses the importance of common threads – the culture of honor and shame or hospitality. Emphasizing the cultural unity of the Mediterranean, even an imaginary one, is an attractive alternative to the cold industrious North.

The concept of Mediterranean culture is articulated by that of cultural capital, which includes both the material culture and its intangible manifestations. These aspects of cultural capital are utilized in the tourist industries of all the heritage-rich Mediterranean countries. A unique example of Mediterranean traditional cultural capital is that of terracing, which is common all over the Mediterranean; the Italian Ministry for the Environment is attempting to produce an inventory of this traditional knowledge. As for water use, the reason for the profligate use of water in Greece is both cultural and political. Water is supplied free to farmers in most parts of Greece and households are charged a minimal amount for water (that, in addition to tradition of hospitality, which meant bread and water to every by passer-by). A culture of waste in relation to water is also common to the Islamic countries of the Mediterranean.

Clearly, water has a deep cultural and religious importance for all the countries that border the Mediterranean. If water resources are considered a "natural capital" it may be an effective strategy to change the attitude to them.

Gaspar Mairal, in the second chapter, compares water policy in 19<sup>th</sup> century Spain and California, particularly how culture shaped the hydraulic thinking of John Wesley Powell in California and Costa in Spain. Both argued that the future of agriculture in an arid land depended on building large dams and reservoirs to store water and irrigate the fields in the dry season. The early hydraulic discourse of both Spain and the USA was structured around the concepts of water, landscape and the nation. Transformation and redemption were focal for both men's vision. Water appears as the instrument of salvation. Spain's water policy in the 21<sup>st</sup> century is in a process of costly transition to a more complex multidisciplinary model of water

management policy.

The third chapter of the book explores water culture in Italy. Eriberto Ealisse found that the concept of water as a "commons", so characteristic of ancient civilizations and rural communities, has been replaced by a wholly misguided one in which water is reduced to a mere commodity ripe for exploitation. The consideration of "traditional" knowledge may play an important role in adopting future strategies.

The solution to problems of water scarcity, desertification and flooding, that today plague the Mediterranean, may be inspired by some principles and techniques of water management that have been used for centuries by local communities. It should be noted, though, that local communities, as the case of Greece shows, do not always manage their water resources in a sustainable manner. Equally important is the small scale of water projects in ancient times, a fact that prevented large scale mismanagement of this resource. Very often, the core of the problem is not the abandonment of traditional methods of water utilization but mismanagement of many of the new hydraulic cultures, which rely on economies of scale. Some of the new methods, such as drip irrigation, are as sustainable as old technologies like water harvesting or terracing.

Part II of the book contains two chapters. Keith Porter presents the legal framework in relation to the right or duty to provide water for human needs. Many of the references quoted in the chapter are old, and many of the issues in this matter, which were explored by A. Wolf, P. Glieck and M. Falkenmark, are ignored. The chapter is general and does not relate to the Mediterranean. Chapter 5, which deals with water resources and conflict in Lebanon, is a biased and superficial description of the conflicts in Lebanon, especially in reference to Hezbollah's responsibility for the recent warfare of 2006.

Part III contains five chapters. In chapter 6, Trammo Steenhuis, in one of the better chapters of the book, depicts quite correctly five stages in the human development of the natural resources base. The Mediterranean is now in stages 4 and 5, namely the fierce competition for the available water among urban, industrial and agricultural uses. Chapter 7 deals with water shortage in Jordan, one of the countries with the highest water stress in the Middle East. Tension among the co-riparians of the Jordan River is high and cooperation or joint agreement on utilization of the shared water resources does not exist. The author is right in his assertion that the general proposition of "water wars" for that region ignores the wide range of options available for overcoming water scarcity, which can relieve the pressure much less expensively. Chapter 8 presents management of water losses in Cyprus. Chapter 9 deals with water and geology in the Mediterranean in relation to water rich/poor geological layers. In the last chapter, Nicholas Hopkins examines water conservation in Egypt. In contradiction to the stated goal of the book, the concluding chapter does not provide appropriate integration to a very heterogeneous nature of this collection of papers.

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