



PIETRO LAUREANO

Water Conservation Techniques in Traditional Human Settlements

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The epoch of the Anthropocene has made us forget that human evolution is a story of co-evolution with our environment, whose destinies we share. Dependence on modern technological solutions have replaced traditional customs and interrupted a chain of knowledge passed down through generations. The book *Water conservation techniques in traditional human settlements* addresses this topic by highlighting the intelligence of 'sophisticated' traditional techniques of urban settlements and landscape resources management. It postulates that local knowledge and technology from the past can be brought together with present technical capacity for sustainable future. The study of traditional knowledge is thus viewed as a contribution towards developing a new water management paradigm.

In this beautifully illustrated work, architect and urban planner Pietro Laureano creates a volume which underscores human ingenuity and patrimony of techniques from all regions of the world. Building on his work¹ of more than twenty-five years as an UNESCO consultant on arid areas and endangered ecosystems, he views traditional knowledge through the lens of historic research of traditional water management techniques and local knowledge as part of cultural history. There is an eighty-one page appendix which is filled with detailed sketches, adding to the richness of these techniques. The book builds on the arguments of scholars like David Brokensha, Dennis Warren

and Oswald Werner on indigenous knowledge systems and with an approach synonymous to the scholarly works of Terje Tvedt, Julia Watson, Sunita Narain and Anil Agarwal, on documenting these practices. By linking his research to the interest and studies on traditional knowledge by international bodies like UNESCO² and ILO³, Laureano makes significant contribution to a growing movement which acknowledges the potential of traditional knowledge for contemporary sustainable territorial development.

This rich documentation is structured in nine chapters, commencing with "Cycle of life" which acknowledges the intrinsic role of water in the world. Laureano expertly brings in mythology, excerpts from fiction, analogies, Greek and Roman philosophers to interpret ancient wisdom linked to water cycles and highlights nature's way of connecting all beings in a cycle of symbiosis and dependencies. Understanding this cycle is crucial to devising how modern technology is able to imitate natural cycles in order to find a new paradigm of coexistence (p. 7). This theme is maintained throughout the book to establish links between the central idea and rich details of various sites. In chapters two to four, Laureano uses classifications of social groupings adopted from archaeology and anthropology - "Hunter-Gatherers", "Farmer-Breeders" and "Metal-using Argo-Astoralists". The investigation into these social groups thus becomes an inventory of technology, knowledge and local practices. Chapter five "Oases", is the synthesis of the 'first level of complexity' illustrating the profound lessons of oases in the quest for a new model of sustainability as an alternative to contemporary development. Chapter six "Urban Ecosystem" extends the oasis model into a city - the next level of complexity by revealing centers of historical importance (the towns of Ghardaia, Shibam, Petra and Matera) with urban features. Each town forms the backdrop to illustrate lessons of complexity and integration of resources. The search for symbiosis and harmony embedded in local knowledge is carried forward into chapter seven, "Water Techniques and Landscape Building" with a focus on Mediterranean and hydraulic societies of the Indian Subcontinent and the Ancient Mayans. Chapter eight, "The Water Crises and the Decline of Civilization", adequately uses complex urban ecology as a synthesis of millenary stratification (p. 203) to further the case of the necessity for formulating a new paradigm. Laureano provides insight into a specific variable of climate change - time. While the natural establishment of desert has followed long geological time enabling environments to adapt in spite of a harsh climate, the process of desertification and climate changes induced by human intervention is rapidly decreasing the amount of time for the biological and physical structure of the planet to adapt (p. 196). This need for urgency and traditional knowledge as a viable solution is demonstrated through chapter nine "Traditional Knowledge for a New Technological Paradigm" wherein Laureano returns to the principal argument of the book that Western

pride is based on a conceptual mistake which needs to be reversed in order to trace it back from a superb pretension of infinity to a simple materiality depending on the fundamental elements of nature (p. 222).

The detailed documentation of each traditional technique does not imply reproduction of an exact solution. The idea is to understand techniques as dynamic systems able to incorporate innovation and the logic within which they operate. This is where the primary contribution of the book lies - rethinking cultural and traditional practices as a base for innovative advanced knowledge for new technological paradigms. The book elaborates how systems of traditional knowledge constitute a cultural and technological mediation through which a vision of the world becomes a social practice, environmental management as well as a guarantee of food and production (p. 214). This outlook of a new vision and acknowledgment of the ongoing creation of tradition as a feature of a 'successful modernity' is another significant contribution of the book. Although Laureano provocatively questions the central role of modern technology in territorial development, in many instances it might seem to create competition between traditional knowledge and modern technology, assuming the virtue of everything traditional against the evils of our modern world. This might be the only possible shortcoming of the book.

The inventory of human history and knowledge is certainly not exhaustive, but rather a frame of reference inviting further explorations. The descriptive narrations are reinforced by several site photographs and drawings that form a rich visual chronicle. Overall, the book is a convincing work offering perspectives concerning the ever-increasing environmental damages and the potential of traditional knowledge in framing technological policies and practices. The book's careful analysis of traditional environments reminds us that resources of the earth are not owned, but part of a symbiotic process which changes over time and reproduces everything linked to each other in the cycle of life (p. 222).

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Notes

See : publications at www.laureano.it

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