

## INTRODUCTION

This volume is a remarkable collection of ideas, visions, and tools for rescuing a global civilization on the path to calamity. Urban climate change is a crossroads in two very different senses. One is historical. With the world now more than half urban, and given the ecological consequences of the world's high-consumption urban centers, we are at an ecological crossroad. We either head off the worst of ecological collapse through concerted and forward-looking action, or we face a "Mad Max future" of dystopia, violence, and upheaval. The second crossroad is intellectual. Our individual disciplines are unable to grasp the magnitude of the economic-ecological challenges ahead. For that we need to work holistically, calling on the knowledge of climatologists, engineers, sociologists, economists, public health specialist, designers, architects, community organizers, and more. The intellectual crossroad is nothing less than a new intellectual field of Sustainable Development. This book makes vivid the first crossroad by achieving the second.

The range of insights is enormous. Richard Plunz sets the stage by reminding us of the Club of Rome's dramatic entry onto the world's consciousness in 1972. *Limits to Growth* was dismissed by the mainstream then, but its warnings have proved to be inescapable and sometimes eerily on track, such as the estimate of atmospheric carbon concentration for the year 2000. We are not facing an inevitable collapse. There is still time to head off the worst, and to adapt to the changes and dislocations that are already in train, but only if we mobilize our knowledge and our politics to do so. Perhaps the current financial maelstrom will have a silver lining, reminding us of our civilization's fragility and our vulnerability to the risks of abrupt change that Plunz emphasizes. The volume's remaining essays give us insights as to how that can be accomplished.

There are no finished proofs or theorems in this volume, only the outlines of a new edifice of sustainable urbanization. Sustainable cities will be sustainably integrated into local and global ecological processes, using energy-efficient and low-carbon technologies, emphasizing the quality of life in local communities, and building healthy systems for transport, recreation, and employment. Ecology and economics will merge, rather than being distant and often conflictive modes of thinking and action. Design in its broadest sense – integrating technology, spatial analysis, community participation, and a deep appreciation of ecology – will provide an integrative framework for action.

The essays address these challenges in such diverse and interesting ways that they hint at the emerging field of Urban Sustainable Development, but they do not yet define the field. It's at this point simply too vast, too interconnected, and too incipient in problem solving to have a clear definition and set of tools. The essays take the same challenge – climate change mitigation and adaptation – and address it through a remarkable multiplicity of perspectives. How should communities govern themselves to achieve true sustainability? What do we mean by environmental justice and how can we achieve it? What forms of communication can help the public to understand the deep, complex, and highly uncertain sciences and engineering related to climate change? How can design mobilize diverse communities of expertise to protect cities? Some of the essays are deeply practical and in the present, such as Cynthia Rosenzweig's description of the sustainability initiatives of New York City, in which she plays an important leadership role. Other essays are highly speculative, looking forward to the disastrous or successful outcomes that await us depending on how we traverse these historical crossroads.

Readers will be stimulated, perplexed, and challenged throughout. They will take a new energy and commitment from the volume. And most important, they will understand that the task of sustainable urban development is one of the world's greatest challenges, with our generation at a world-shaping crossroad.

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