

A Practice-Oriented Ecological Urban Planning Path: Review of *A Practical Guide to Eco-City*

Zheng Shanwen, Zhu Chaoyang, Wang Jianqiang

Translated by Qian Fang / Proofread by Liu Jiayan

A Practical Guide to Eco-City

Author: Yan Wentao

Year: 2021

Publisher: China Architecture & Building Press

ISBN: 9787112255344 (284 pages, in Chinese)



After the industrial revolution, mankind has gained unprecedented ability to transform nature and gradually gathered in cities, which also brought about the disorderly urban sprawl and energy resource consumption, leading to a great threat to the natural ecological environment. In response to the increasingly serious urban ecological environment problems, the world has reached a consensus that we should focus on the relationship between people, cities, and nature, strengthen ecological protection, and promote green development. Since the 18th National Congress, eco-civilization and green development in China has become a national strategy, and planning and construction of eco-city is regarded as an important path for the conservation of eco-environment and construction of beautiful China. In this context, how to plan and build an eco-city and how to deal with the relationship between people and nature in the city have become important research topics in the urban planning field.

The Ecological Wisdom and Practice Series is one of the valuable explorations by Chinese researchers in the field of ecological planning and practice in recent years. In this series of books, *Traditional Villages: Ecological Wisdom for Water Management* mainly focuses on ecological water management wisdom of Chinese traditional villages; *Landscape and Regional Ecology: Planning Methods* explores ecological research and analysis methods at the regional level; and *A Practical Guide to Eco-City* focuses on the content of ecological practice in urban scenarios. The three books discuss ecological planning and practice from historical, methodological, and practical perspectives respectively. *A Practical Guide to Eco-City* is an in-depth analysis of current urban ecological issues from the perspectives of

eco-city theory, technical methods, and practical paths, aiming to bring practical inspiration for eco-city planning, construction, and governance. At the same time, its novel perspective on the topic will stimulate readers to think more about the diversity of eco-city practices. The exploration of practice-oriented eco-city planning paths is the biggest feature of the book, which also distinguishes it from other books, making it both of strong academic value and practical significance.

The original purpose of the eco-city theory was to deal with the ecological and environmental problems caused by urban sprawl, and its connotation has changed dynamically with the development of cities and the progress of understanding the relationship between people and nature. At present, there are still many problems in the research and practice of eco-city in China. For example, there are many confused concepts similar to eco-city, many differences and misunderstandings in the concept and connotation of eco-city in different researches, big separation between the research and practices related to eco-city, and poor adaptability of foreign eco-city planning and construction methods to the conditions in China. If these problems are not solved, they will hinder the development of eco-civilization in China. In view of the situation, the book *A Practical Guide to Eco-City*, through a panoramic review of the development process of eco-cities, interprets the existing problems in eco-city building, analyzes the cognition and response of domestic and foreign researchers to the relevant problems, and provides experiences and suggestions for practices of ecological urban development and planning.

Yan Wentao, the author of the book, is a professor at the College of Architecture and Urban Planning of Tongji University and a board member of the International Society of Ecological Wisdom. He has conducted continuous and in-depth researches in the fields of ecological urban planning theory, land use planning, and environmental management, completed a series of practical projects in the field of ecological planning, and has rich and valuable experience in eco-city practice and academic research.

The overall framework of the book can be divided into three parts:

review of basic theory (Chapters 1 & 2), technical topics (Chapters 3 – 10), and exploration of practice paths (Chapters 11 & 12). Among them, the part of basic theory sorts out the evolution process of ideological cognition and practice of eco-city, analyzes the logic of ecological practice, and systematically discusses the connotation and framework of eco-city. In the part of technical topics, the index system and implementation paths of eco-city are constructed to guide and evaluate different planning objectives, the contents and practical cases of biodiversity conservation, climate change, and urban water system are analyzed thoroughly, and a spatial planning framework for integrating ecosystem services is proposed. In the part of practice paths, the focus is laid upon aspects including social equity, ecological justice, and inventory space utilization and transformation, in combination with the analysis of current eco-city practices in China and possible challenges in the future.

In the first part, it elaborates the theoretical dynamics of eco-city from three perspectives: cognition, thoughts, and practice, clarifies the connotation and characteristics of eco-city, explores “what” and “why” of eco-city, and reveals “how” of past practitioners from the macro level. The part also tries to focus on the practice and deeply elaborate more on the connotation, characteristics, logical construction, and framework system of ecological practice. The author points out that a harmonious relationship between people and nature is the conscious collaboration of the practice subject with the natural ecosystem, which precisely answers the proposition of how to deal with the relationship between cities, people, and nature.

In the second part, taking the index system and the implementation path as the entry point, it discusses the operation process of eco-city in actual planning and implementation, and shows the implementation process of the index system concretely with two cases. For example, the case of Leshan City in Sichuan Province introduces its 30 years of eco-city construction, and illustrates how to balance development and environmental protection. In terms of specific topics, action strategies are proposed in the context of real cases. For example, in the aspect of biodiversity, the impact of high-intensity urban development on biodiversity and urban ecosystems is discussed, so is the question of how to protect urban biodiversity through spatial planning; in the aspect of climate change, how to improve urban resilience and mitigate climate change in the process of urban construction is discussed; and in the aspect of urban energy consumption, the impact of urban spatial structure and scale on the energy flow process is analyzed, and it is proposed that a synergistic and integrated urban land development strategy should be adopted to reduce energy consumption in buildings, transportation, and industry.

In addition, green infrastructure, biocultural diversity, ecosystem service assessment, and social equity are also covered.

In the final part, through a novel way of understanding urban environmental problems from the social construction perspective, it points out that eco-cities cannot be realized only by short-term material development, but need long-term social consensus cultivation, and also need to pay attention to the demands of disadvantaged groups from the perspective of social equity and urban ecological justice, and promote equitable planning, etc. The discussion on urban social and equitable planning in this part also coincides with the hot topics on “people’s city” and “all-age friendly city” in domestic and international academic circles at present.

In summary, the book analyzes in-depth eco-city construction at home and abroad, systematically proposes the eco-city index system and implementation methods from the perspective of the underlying logic and the development evolution of eco-cities. On this basis, it analyzes the practice and research of eco-cities under different topics, establishes the connection between methods and practice, and explores the inspiration for eco-city planning and construction in China in the context of inventory development. In particular, the six basic characteristics of the eco-city system, including organicity, spatial matching, temporal connection, geographical characteristics, social diversity, and synergy, as well as the five logical laws, which are the law of wholeness, the law of environment adaptation, the law of fault tolerance, the law of adaptation, and the law of feedback, as well as the concept and implementation path of eco-city in the context of urban regeneration, are all important methodological inspirations for current practice of eco-city planning and urban regeneration in China.

The author of the article believes in the context that eco-civilization development and carbon peaking and carbon neutral have become national core strategies, the development of eco-cities need to explore the responsive path of planning as soon as possible and strengthen the implementation of planning, which requires extensive participation of policy makers, planners, designers, and the public. Therefore, the book is more comprehensive than similar books by covering the focus of different social actors, with a rich content and representative planning cases and practices. At the same time, taking into account the current needs of the construction of territorial and spatial planning system and the shift of urban development focus to inventory development in China, the book also explores the integration of ecosystem services into territorial and spatial planning and the practical path of eco-city construction in the context of

urban regeneration, which further enhances the practical orientation and academic value of the book.

The significance of the book, for policy makers, is that it helps to understand the issues that cities need to focus on in the context of ecological civilization, and to understand the technical methods, management models, and planning strategies for specific ecological issues, in order to effectively promote the modernization of ecological governance system and capacity. For planners, on the one hand, the in-depth discussion on the concept and connotation of eco-cities helps planners to transform dominant ideas from industrial civilization to ecological civilization, which is of profound significance in the context of territorial and spatial planning; on the other hand, the in-depth discussion on specific ecological issues and rich practical cases in the book help planners understand the underlying logic of urban ecological issues and to be able to quickly find relevant references when facing specific problems. For the public, the book introduces the detailed relationship between eco-city practice and social construction, which helps the public understand their environmental rights and interests, enhance their awareness of participation, and actively protect their urban and natural environment in their daily lives.

The core content of the book is to discuss eco-city practice, but generally it still focuses on eco-city practice theories, i.e., the discussion of logic, value, and theory of eco-city practices. And there needs more analysis on the cases of eco-city practices, such as the analysis of regional applicability and economic cost of relevant eco-technologies or policies. In addition, the cases in this book are mainly from foreign countries, with less analysis and evaluation on domestic cases. Whether some of the measures can be applied to China's urban development needs to be further explored. Moreover, the book focuses on the overall research and practice of eco-city at macroscopic scale, while less discussion at medium and microscopic scales. In conclusion, with the growing importance of eco-civilization and green development, the research and application of practice-oriented eco-city planning needs to be strengthened, and more and better works on eco-city planning and practice are expected to be published in the future. ■

(Funded by National Natural Science Foundation of China (Nos. 51908004, 52078007).)

Reviewers

Zheng Shanwen, Associate Professor, Deputy Director, Department of Urban and Rural Planning, Faculty of Architecture, Civil and Transportation Engineering, Beijing University of Technology, Beijing, P. R. China. Research area: ecological urban planning and design, green urban regeneration. Email: shanwen2010@163.com

Zhu Chaoyang, Postgraduate Student, Faculty of Architecture, Civil and Transportation Engineering, Beijing University of Technology, Beijing, P. R. China.

Wang Jianqiang (corresponding author), Professor, Faculty of Architecture, Civil and Transportation Engineering, Beijing University of Technology, Beijing, P. R. China. Research area: sustainable urban planning and design. Email: wangjq93@126.com