

Preface

Wetlands, known as “the kidney of the earth”, “the cradle of life” or “the birthplace of civilization”, are one of three grand ecosystems (the other two are forests and oceans). They not only possess many ecological functions such as maintaining biodiversity, regulating and storing floodwater, resisting natural calamities, degrading contaminants, modulating climate, and retaining water source, but also provide human beings with many kinds of resources, including water, food, meat, fish, medicinal materials, energy and mineral resources, and various industrial raw materials.

Shanghai, one of the world's largest cities, is located at the Yangtze River mouth, holding estuarine wetlands, inland rivers and lakes. The city's total area of wetlands is 3200km², accounting for about 40% of its land area. Therefore, Shanghai actually is a city built upon wetlands. The wetlands support 70%–80% of biodiversity in Shanghai, and provide suitable habitats for 400 bird species, over 250 fish species, more than 260 species of zooplanktons, more than 150 species of benthic fauna and over 300 species of aquatic plants, thus wetlands are the most concentrated area of biodiversity in Shanghai. The Shanghai Municipal Government has paid much attention to its environmental protection and ecological construction. Over the past decades, a network of nature reserves of wetlands has been established in Shanghai, which has *basically* covered all the key, sensitive and vulnerable

areas of the wetlands. During “the Tenth Five-Year Plan”, Chongming Dongtan Birds Nature Reserve focusing on migratory bird protection and Jiuduansha Wetland Nature Reserve dedicated to the conservation of newly-formed estuarine wetland ecosystems, were both upgraded to national nature reserves, leading to a historic breakthrough in the municipal nature reserve construction. During “the Eleventh Five-Year Plan”, Shanghai will put special emphasis on the construction of “three lands”, including green lands, woodlands and wetlands, do the best to build up a naturally and ecologically urban system which is rational in layout and mature in function, and make every effort to realize the comprehensive and harmonious development of afforestation and forestry. The well-known Ramsar Site Chongming Dongtan will definitely play a critical role in this process.

Chongming Dongtan is located in the east part of Chongming Island. It is the third largest island in China and the largest estuarine alluvial island in the world. Located at the junction of the Yangtze River, the Yellow Sea and East China Sea, Chongming Dongtan stands in a unique geographic position. Its formation, development and evolution are greatly affected by the sea, islands, the mainland and the rivers, which make it a globally important estuarine wetland that is still continuously growing, extending up to 80-100m towards the east annually.

A series of real and vivid pictures of human reclamation history is presented, and the stories about the evolution of the Earth are being told at Chongming Dongtan. It also continues to supply valuable land resources for the construction and development of Shanghai. It supports 70%–80% of the regional wildlife species, provides important stopover site and wintering grounds for hundreds of species, almost a million “international passengers”, and critical migratory route for various aquatics as well. Chongming Dongtan is also attracting more and more attention from the experts and researchers all over the world, and has become one of the hotspots of studying ornithology and wetland ecosystem ecology.

State Council of China, Shanghai Municipal Government and other Departments have spent much effort in appropriately conserving and managing the biodiversity of Chongming Dongtan so as to scientifically construct Chongming Eco-island and Shanghai Eco-city. Since 1992, the State Council and many international organizations have recognized Chongming Dongtan as a key protected region of China Biological Diversity Protection Action Plan and China Wetland Protection Action Plan, a member of Asian- Australasian Wader Protection Network and a Wetland of International Importance. In November 1998, Shanghai Chongming Dongtan Birds Nature Reserve was established by the Shanghai Municipal Government. Since the reserve was set up seven years ago, the Reserve managers have overcome many difficulties to promote the construction and management of the reserve, and got it upgraded to National Nature Reserve with excellent infrastructures.

The Reserve is now fully functioning, including effective management, wetland and waterbird investigation, scientific research and education, and international cooperation. As the reserve management is strengthened day by day, its ecological environments have been greatly improved, and its functions in protecting rare and endangered species are exhibited. For this reason, the global reputation of Chongming Dongtan National Nature Reserve has been built up.

In the 21st century, Chongming Dongtan is faced with the challenges of Chongming Eco-island construction, Chenjiazhen-Dongtan area development, and Eco-city building and coordinated development of afforestation and forestry of Shanghai. This book not only is a summary of the past studies but also will help us to plan a new round of further construction and development of the Reserve. The publication of this book will present the natural beauties and rich biodiversity further to the world, and arouse our love for wetlands and their environments.

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