

Preface

Environment is the foundation and support of human existence and survival and the guarantee of sustainable human development; environmental protection has undoubtedly become a common understanding and development strategy of all countries of the world. The influence of environment on economic and social development has never been so obvious and people's understanding on environmental issues has neither been as profound as it is today. In particular, with the heavy attack by global financial crisis and the progress of industrialization, people begin to seek rebalancing between humankind and environment at a higher stage of development. In the world today under the tide of economic globalization full of challenge and competition, the focus of competition is no longer only limited in the economic, political and military fields; competition in the environmental field has also attracted wide attention from all over the world. Environmental management and climate change resilience have been recognized by all countries and regions as important leverage in participation in international competition. So to speak, environmental competitiveness has become a key component of the comprehensive competitiveness of a nation or region.

Researches on environment competitiveness and environmental issues are in the same line. The results of researches on environmental issues over the past hundreds of years have provided precondition and foundation for the research on environmental competitiveness, while environmental competitiveness researches integrate both environment and competitiveness, breaking the limitation of studies on environmental issues alone and making in-depth discussions on environmental competitiveness from multiple disciplines of economics, management science, operation research and sociology; it emphasizes exploration into environmental ability and leads to new economic model, development pattern and life style. In summary, doing environmental competitiveness research not only further deepens and advances the theories about environment and competitiveness, but also fits into the trends of global environmental protection, and thus having important theoretical and practical significance.

At present, environmental impact has gone beyond the regional and national scope, changed from a local issue to a regional and global issue. Due to the pervasion and uncontrollability of environmental damage and pollution, the environmental pollution or safety accident in one country or region might very often endanger the surrounding countries and regions or even cause global environmental disaster. Therefore, to enhance global environment competitiveness requires all countries to consider the issue from the basis of common benefit of the globe, strengthen dialogue and negotiation, jointly combat and solve global environmental challenges and promote the coordinated advancement of global environment competitiveness. In the meanwhile, after experiencing the hit of global financial crisis and the debt crisis in the euro zone, global economy has also come to a stage of bumpy speeding down for transformation. This has set an urgent need to break the bondage on traditional development pattern, change the mode of relying on high input in return for high output, seek the engine to lead the new round of economic growth, focus on synchronized economic growth, social progress and environmental improvement, enhance all countries' ability to face with environmental problems and crisis and strengthen international environmental protection agreement execution and collaboration, so as to enhance global environment competitiveness and realize the happy vision of global sustainable development.

Environmental issue is a global issue. Governments of all countries of the world must have the wisdom and courage to go beyond the bondage of narrow national interest; walk towards the directions of international cooperation, collective security, common benefit and rational negotiation that are pursued by humankind; adopt effective environmental measures; jointly build a continually progressing world, a low-carbon and harmonious world; apparently enhance global environment competitiveness; and realize global sustainable development. Therefore, the Fujian Normal University Branch Center of National Research Center of Comprehensive Economic Competitiveness initiated the research on the first green book Report on Global Environment Competitiveness (2013), with the strong support and help of United Nations Environment Programme (UNEP) senior economist Sheng Fulai. During 25–26 March in 2013, United Nations Environment Programme, Chinese Academy for Environmental Planning of Ministry of Environmental Protection of China, Policy Research Center for Environment and Economy of Ministry of Environmental Protection of China and Fujian Normal University jointly organized the “International Workshop on Green Economic Transformation and Environmental Competitiveness indicators” in Fuzhou City, China. More than 40 well-known experts in the field of environmental economics, from the UNEP, World Economic Forum, World Wide Fund For Nature, Global Green Alliance, Institute for International Environmental Strategies, International Labour Organization, Indonesian Ministry of Environment, Ministry of Finance of Uruguay, Commission on Sustainable of Mauritius, Institute for Green of Korea, Central European University, University of Malta, Ministry of Environmental Protection of China, Chinese Academy of Sciences, Chinese Academy of Social Sciences, China Center for International Economic Exchanges and Beijing Normal University, attended the workshop and deeply discussed the discussion paper “Global Environment Competitiveness

Indicator System and Evaluation”. The experts believe that “Report on Global Environment Competitiveness” is the first report on global competitiveness evaluation led and introduced by the developing country, and it is an important breakthrough and innovation. In order to further deepen the study of this project, after the workshop, the research group organized the research again for more than 4 months. We fully absorbed the valuable comments and suggestions proposed by experts and strived to make the research ideas, research methods and so on of the book effectively converge with the international rules. So far, we finally show the study in front of the readers on schedule.

Since 2008, the research group embarked on the study of Global Environment Competitiveness and got the guidance and help of leaders and experts of Chinese Academy for Environmental Planning. We released two green books, i.e. *Report on China's Provincial Environment Competitiveness Development (2005–2009)* and *Report on China's Provincial Environment Competitiveness Development (2009–2010)*. The former won the first prize of Fujian Excellent Social Science Achievement Award and the second prize of the sixth Universities Excellent Achievement Award (Humanities and Social Sciences) Award. In the meanwhile, the research group also studied China's Provincial Economic Comprehensive Competitiveness and National Innovation Competitiveness. During the NPC & CPPCC period in the years from 2007 to 2013, we successively released seven blue books of *Report on Overall Competitiveness of China's Provincial Economy*, the yellow books of *Report on Group of Twenty (G20) National Innovation Competitiveness Development (2001–2010)*, *Report on Group of Twenty (G20) National Innovation Competitiveness Development (2011–2013)* and *Report on World Innovation Competitiveness Development (2001–2012)* jointly with the Science and Technology Section of Chinese Mission to the UN; part of the research was also published in the English version in *Paths of UK to the globe*. The release of this series immediately attracted wide attention from government authorities at both central and local levels as well as the academic and theory circles and aroused wild reporting about the research in mass media in China and other countries, producing big social impact. It is worth mentioning that the blue book series of *Report on Overall Competitiveness of China's Provincial Economy* won the “Biggest Impact Award of the 1st China's Excellent Book Series Award” and “China's Excellent Book Series Award” and that the book series is the only research result presented by a local university among the 10 award winners. Another two reports prepared by the Branch Center, “General Evaluation Report on the Overall Competitiveness of Provincial Economies of China 2009–2010” and “Overall Evaluation and Comparative Analysis of G20 National Innovation Competitiveness 2001–2010”, again won the first prize of the 3rd “China's Excellent Book Series Award-Report Award”. The Branch Center is also the only research group throughout the nation that won two first prizes in the award.

This first edition of the green book of *Report on Global Environment Competitiveness (2013)* is the latest research result of FNU Branch Center. We hope that, through furthering the research on global environment competitiveness, environmental economy will carry new connotations and we will make in-depth discussions about the development and future of GEC from theoretical, methodological and empirical dimensions so as to make our contribution to

promote global sustainable development. Based on adequate reference to the previous results of related researches both in China and abroad, this study kept tight tracking on the leading research edge of multiple disciplines covering environmental science, economics, ecology, management, statistics, econometrics and human geography, analyzed the level, features of change as well as trends and driving force of environment competitiveness of world countries and established global environment competitiveness indicator system and mathematical model. We also collected the latest released data of environmental economy of 133 countries of the globe. After scientific evaluation and comparative analysis on the processed data, the study finally revealed the features and differences of environment competitiveness of the countries of different type and at different stage of development, defined the environmental competitive advantage and weak links of each country and did follow-up study on the evolution track and path of enhancement of environment competitiveness. It will provide valuable theoretical guidance and practical measures for all countries to enhance environment competitiveness. The whole book is composed of three parts and annex; its framework is as follows:

- Part I is Theory and Methodology, which makes clear the research contents and methodology used in the study. This part fully explains the significance, contents and evaluation methodology used in GEC research and establishes the evaluation indicator system and mathematical model of global environment competitiveness according to the characteristics; the technical roadmap and analytical approach of this study are also introduced in this part, hence forming a complete analytical framework for global environment competitiveness.
- Part II is General Report, i.e. general evaluation report on global environment competitiveness. General report evaluates and analyzes the environmental competitiveness of 133 nations in 2012 using the evaluation system composed of 1 index, 5 sub-indexes, 14 pillars and 60 individual indicators. Based on comprehensive analysis, the report makes in-depth analysis on the trends of GEC, introduces the regional distribution of environment competitiveness of the countries, reveals the environmental advantages/disadvantages and relative position of all the countries and regions, summarizes the characteristics of GEC during the evaluation period and presents the elementary path and policy advice to enhance GEC, thus providing valuable decision-making reference for all countries in establishing environment development strategy.
- Part III is Sub Reports, i.e. evaluation and analysis on environment competitiveness by country. This part is special reports that give comparative analysis and evaluation on the environment competitiveness of 133 countries covered by this study in 2012. It shows the characteristics and relative differences of environment competitiveness of the countries of different types and at different stages of development, defines respective competitive advantages and weaknesses and makes follow-up studies on the evaluation track and way of enhancement of environment competitiveness in each country.

Annexes list the evaluation scores of environment competitiveness and five sub-indexes in the 133 countries in the evaluation period, which will be good reference for readers who want to do quantitative analysis.

This book refers to an area of research crossing multiple disciplines and also a study of international issues involving 133 countries. Due to the constraints of both subjective and objective factors, such as knowledge structure and academic ability of the team and data availability, the research is far from thorough and complete in certain aspects and there are still many subjects requiring further study. We wish to join the intellectuals from governmental agencies, international organizations, academic institutions and universities of the world and environmentalists who have interest in global environmental issues to continue the research on GEC, thus making the evaluation objective and providing valuable decision-making reference for the sustainable development of economy and society in all countries.

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Writers

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