## USTAINABLE DEVELOPMENT IN CHINA

# 可持续发展之路

北京大学中国持续发展研究中心

Research Center for Sustainable Development of China in Peking University

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#### 北京大学首次可持续发展科学讨论会文集

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#### 内容简介

本书为北京大学于1994年元月4日在该校召开的首次可持续发展科学讨论会会议文集,共汇集61篇论文。

本文集是北京大学文理科有关的系、所、中心的专家学者以及教师等,在最近若干年中围绕社会、经济、人口、资源和环境协调发展问题所作的理论、方法、技术及应用实践等诸方面的研究成果的系统汇总。本书包括:可持续发展模式的理论探讨,可持续发展指标体系及实施方法,环境与可持续发展,资源与可持续发展,经济与可持续发展,社会与可持续发展和区域的可持续发展等7个方面的内容。对中国的未来发展进行的科学探讨是本书的中心内容。在宏观上指出了可持续发展是中国未来发展的必由之路,在微观上对可持续发展过程中将面临的种种问题提出了独特的见解。本书内容覆盖面广,论述详尽,资料翔实,是一本关于可持续发展的、具有科学性和实用性的重要论著。

本文集对政府管理部门、生产部门、教育部门的各级领导,在作重大经济和社会决策时有实用价值,可为制订长远规划提供多方位的考虑,对各大学和研究院从事综合性研究的教师和科研人员,提供了中国可持续发展研究的基本资料、信息和研究方向,无论是在教学和科研方面皆是一本有一定科学价值的重要参考书。

#### 书 名: 可持续发展之路

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#### 序言

现在人们常常惊呼:"地球变得越来越小了"。这一方面反映交通通信的日益发达,到地球上任何一处好似近在咫尺,另一方面反映人类对地球资源取之不尽、用之不竭的时代已一去不复返了。人们急切地感到,人类的生存和发展正面临威胁。解铃还需系铃人。源于当代科学技术迅猛发展所造成的全球环境问题,还需要人们自觉地改变传统的观念、探索科学的途径、创造全新的技术,以对全球和子孙后代负责的精神约束自己,规划出一条使人类社会经济活动与自然环境和谐共存、协调发展的道路。这就是持续发展要解决的课题。

1992年6月,有一百多个国家元首和政府首脑参加的联合国环境与发展大会,通过了《里约宣言》和《21世纪议程》等重要文件,敦促各国政府承诺为促进全球持续发展而共同行动,并要求以全球《21世纪议程》为指导,制定本国的持续发展战略并付诸实施。中国政府高度重视联合国环发大会的决定,决心履行国际义务,使正在迅速发展的我国经济和社会走上持续发展的道路。在短短一年多的时间里,由国家计委和国家科委牵头,编制了《中国 21世纪议程》。《中国 21世纪议程》表述了当代中国可持续发展战略,提出了促进经济、社会、资源、环境协调发展的一系列政策、措施和行动计划,力求探索一条具有中国特色的可持续发展道路,为了贯彻实施《中国 21世纪议程》的宏伟计划,国家还将选定若干优先项目,并争取纳入国家经济与社会发展计划。这里包括了大量科学研究课题。

正在努力改革和发展中的北京大学,在继续保持和发扬基础学科的人才培养和科学研究方面优势的同时,大力加强和拓宽着应用领域中的教学和研究,并且把直接参与社会主义现代化建设、努力做好社会服务作为自己不可推卸的历史职责。北京大学依靠自己人才和智力的优势,发扬文理综合、学科齐全的长处,有义务也有能力为中国的可持续发展作出自己应有的贡献。为此,我们积极组织校内学者、教师和研究生参与《中国 21 世纪议程》的编制和优先项目的设计,并且在国家计委、国家科委和国家教委的支持下,于 1993 年 12 月成立了跨院系、跨学科的文理结合的研究机构——"北京大学中国持续发展研究中心"。参加这个中心的校内单位有环境科学中心、遥感技术应用研究所、城市与环境学系、地质学系、地球物理学系、经济学院、法律学系、社会学系、社会学人类学研究所、工商管理学院、高等教育科学研究所、人口研究所和生命科学学院等十几个系所。北京大学中国持续发展研究中心的成立体现了北京大学愿为《中国 21 世纪议程》的实施,为探索有中国特色的可持续发展道路贡献力量的决心,标志着分散在各个系、所、中心里的研究和教学力量有组织的凝聚和协调合作,从而在为我国可持续发展事业作贡献的工作中迈出了坚实的一步。研究中心将根据《中国 21 世纪议程》纲要、行动计划和优先项目的要求,安排自己的研究课题和工作计划,还将积极开展各类人才培训活动。

可持续发展模式的研究和实施是一个复杂的系统工程,是一个庞大的综合课题,它既涉及经济、法律、政治、社会、教育等社会科学各领域的理论与实际政策,又涉及资源利用、环境保护和工业、农业、交通、通信、医药等各方面的原理与技术。研究人员和实际工作人员既要具有坚实的本领域的理论基础、专门知识及技术,同时又要对相关领域和整体的要求有清晰的认识。不同学科领域的工作人员对同一个问题的认识角度、研究方法、处理技术,乃至概念术语往往会有不小的差别,这是多学科联合研究所必须克服的困难。不过只要抱着虚心学习、取长补短、

兼容并包、求同存异的态度,困难就可克服,而且可以使优势互补,长处集中,使问题迎刃而解,奏综合研究的奇效。在这里,最要紧的,也是最起码的,是要扩大眼界,增进了解。

因此,北京大学中国持续发展研究中心成立后的第一件事就是组织一次科学报告会,把参加中心的成员现有的有关中国可持续发展问题的研究工作都作一介绍,以便加强了解。会议收到了70多份报告,这说明北大学者对中国可持续发展问题的关心。在这本文集中,我们汇集了大会报告的绝大部分论文,并作为附录刊登了提交大会的其他论文题目。由于过去我们没有对这一问题组织过专门讨论,因此这些报告对中国可持续发展问题的看法会有角度不同、深浅不同和联系的紧密程度不同,但总还是可以反映北大学者对这个问题研究的概貌和广度,从而为我们今后有组织的研究打下一个相互了解的良好基础。另外,这本文集还可以使社会有关人士对北大关于中国可持续发展问题的研究基础有一个大概的了解。

新生事物总是幼稚的,但幼稚的却往往是最有生命力的。我相信我们中心再出论文集的时候,将会对中国可持续发展的若干问题提出一些比较成熟和比较系统的见解。

王义道 1994年3月于北京大学

#### **Preface**

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Contemporary people usually exclaim: "the earth is getting smaller and smaller". On one hand, this reflects the gradual development of communication and transportation which make people within easy reach of any corner of the earth. On the other hand, this exhibits the age of interminable adaptation and everlasting exhaustion of earth resources — an era of harmonious coexistence between human being and natural environment — is gone forever. People feel anxiously that the survival and development of human being are being threatened. As consequences of the rapid development of science and technology, the environmental problems appear prominent. One who creates the problem should solve it. Under the spiritual responsibility for the earth and our offspring, we are obliged to restrain ourselves. We are also urged to explore scientific methods and invent new technology conscientiously. Inexorably, we will find a course in which socioeconomic activities harmoniously coexist with natural environment. This is the question that sustainable development ought to deal with.

In June of 1992, more than 100 government and country leaders participated the UN Conference on Environment and Development, and the conference passed the Rio Declaration, Agenda 21, and other important documents. This conference encouraged governmental pledge to promote sustainable development in the whole world, and it also required each country under the guidance of Agenda 21 to stipulate the strategy of sustainable development and implement this strategy in practice. Paying close attention to this conference, the Chinese government has decided to fulfil the international duty so that the current rapid socioeconomic development of China is accorded with requirements of sustainable development. In just about one year, under the leadership of China's National Planning Commission and China's National Science and Technology Commission, China' Agenda 21 is compiled. Trying to follow a course of sustainable development with Chinese characteristics, China's Agenda 21 propounds China's strategy of sustainable development. This agenda proposes a series of policies, measures, and activity plans to achieve the harmonious advancement in coordination of economy, society, resources, and environment. The contents of China's Agenda 21 are rich and broad, for the coverage of China's Agenda 21 ranges from fields related to socioeconomic development to several dozens of fields of natural science and technology. China's Agenda 21 includes a number of scientific research projects. To implement this grand plan, our Chinese government is on the way to select some priority projects and is going to incorporate these priority projects into the national socioeconomic development plan.

Being active in China's contemporary reform and development, Peking University will continuously preserve and develop the advantage of researching and training in fundamental sciences, and will simultaneously strengthen and widen the scope of teaching and researching in applied fields. Being vigorously involved in the great enterprise of socialist modernization,

Peking University is pursuing her objective of serving society as the invadable responsibility. With her abundance of intellectual and human resources and with the advantages of comprechensiveness of natural sciences and liberal arts as well as completeness of diverse disciplines, Peking University has both the responsibility and ability to contribute herself to the undertaking of China's sustainable development. Because of these, we actively organized scholars, teachers, and graduate students in our university to involve in the compilation of China's Agenda 21 and the designing of priority projects. At the same time, under the support of China's National Planning Commission, China's National Science and Technology Commission, and China's Education Commission, we established a collaborative research organization, Research Centre for Sustainable Development of China in Peking University, which involves in many colleges and disciplines of both sciences and liberal arts. More than a dozen work units of the university are affiliated with the centre, they include the Centre for Environmental Science, Institute of Remote Sensing Technology and Application, Department of Urban and Environmental Science, Research Centre of Information Science, Geography Department, Geophysics Department, College of Economics, College of Business Administration, Law Department, Sociology Department, Research Centre of Management Science, Institute of Sociology and Anthropology Research, Institute of Population Research, and Research Institute of Advanced Education Science, Life Science College. The establishment of the Research Centre for Sustainable Development of China in Peking University manifested the desire of Peking University to apply herself to China's Agenda 21, and showed great resolution of Peking University to endow herself in the research of sustainable development which has Chinese own characteristics. The establishment also showed the strength of the collective intellectual and human resources of diverse departments, institutes, and research centres and demonstrated the spirit of collective cooperation. It is a first practical step towards achieving our grand objective of China's sustainable development. According to requirements of China's Agenda 21, the Action, and China's priority projects, the research centre will arrange research projects, devise work plans, and develop training programs of various specialities.

The research and implementation of sustainable development are a complex systems engineering. As a great and comprehensive research project, the sustainable development involves not only theories and practical policies of miscellaneous disciplines of social sciences such as economics, law, politics, sociology, education, and demography but also numerous fields of natural science and technology such as the utilization of natural resources, environmental protection, industry, agriculture, transportation, communication, and medicine. A person who does this kind of research or practical work not only needs to have a solid mastery of his own field of expertise but also has to have an unclouded understanding of related fields and related requirements of sustainable development. People from assorted disciplines result in variety of understandings of problems, research methods, study tactics, and even bring about discrepancies in definitions and methodological terms. This is the difficulty that

the multi-disciplinary research is often confronted with. However, this difficulty can be overcome if everyone has an attitude of learning from each other, being modest and prudent in learning, seeking common ground while reserving differences, overcoming one's weakness by acquiring other's strong points, and incorporating things of diverse nature. With this right attitude and with the complementarity of various advantages and convergence of various strong points, we are able to solve questions easily. This is a wonder that the multi-disciplinary research can usually yield. Finally in this regard, I feel worthwhile to use a sentence to emphasize that the most important and also the most essential aspect of sustainable development research is to deepen and widen our insight, and provide favourable ambience of mutual understanding.

Because of this important feature, the first thing after the establishment of the Research Centre for Sustainable Development of China in Peking University was to organize a acientific meeting. In the meeting, people who are affiliated with the centre introduced their current research works on the China's sustainable development, and enhanced their mutual understanding. The meeting received more than 90 articles, which highlighted Peking University's concern about China's sustainable development. In this symposium we list the titles and abstracts of most of the articles. Because in the past we did not organize this kind of activity and more importantly we did not have reciprocal exchange of ideas before the meeting, articles in this symposium may express views on China's sustainable development from disparate angles, with different depths, and with dissimilar magnitudes of association with sustainable development. Nevertheless, these articles reflect the research situation and breadth of investigation of scholars of Peking University on various problems of sustainable development. In addition, these articles have laid a solid foundation of mutual understanding, which is significant in future cooperative research. These articles have also made people who are concerned with sustainable development have a general understanding of researches at Peking University and of basic research in China's sustainable development.

New things are always young, and youths are invariably full of life. We believe confidently that when we publish our next symposium in future, on some questions of China's sustainable development, the future researches will become more systematic and accomplished.

Wang Yiqiu
Deputy President
Peking University

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