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上海资源环境蓝皮书

主编 诸大建

超常规发展

环境产业

An Environment and Resources Bluebook of Shanghai, 2002
Accelerated Development of the Environmental Industry

上海社会科学院出版社

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Part One: General Considerations to Shanghai's Environment Related Industries Development in the New Century

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| The environment related industries: its market tendencies and prospects | (8) |
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As a newly defined economic section, environmental related industries differ from the traditional defined "environment protection industry". It covered a very wide catalogue of goods and service production. Its ideas, designs, and technologies can penetrate into all of the traditional economic activities, push the national economy towards a direction of sustainable development. In Shanghai, there still are some barriers for such a widely defined environmental related industries growth well. For example, whether or not a technology belong to "environment protection

Accelerated Development of the Environmental Industry

industry" must be admitted by a government agency, nearly all industrial associations have no branch to promote their environmental progress, and there are not a market for green technologies. A set of policy instruments were discussed here for push the industries ahead.

Current analysis and policy considering of Shanghai's environment related industries (44)

Four years have passed since the national survey on environmental protection industry in 1997. This paper generalizes the basic profile of the newest survey on Shanghai's environmental protection relative industry through the new statistics' standard laid down by national authority and puts forth further countermeasures for the problems concluded from the survey.

Proposals and suggestions to establishing Environmental Science-tech Park and environment related industries basement in Shanghai (68)

Constructing environmental Science-tech Park or "green valley" is the important mechanism to foster and promote Shanghai's environment related industries, according gathering of science-tech, industry, capital and policy to reach the jumping development of Shanghai's environmental industries. This paper sticks out the basic status of market mechanism for Shanghai to develop its environment industries and emphasis the government should focus on institution created related to environment industry market

during the process of promoting the development of the environmental protection industries.

Part Two: Key Issues for Shanghai's Today Environment Related Industry Development

Strategic target and essential content of Shanghai's environmental protection industry development (102)

This paper takes fostering new expansion point in Shanghai's industry development as cutting point. According the demands from national and Shanghai's "environmental protection 'ten-five' program and the planning outline until 2015" and "Shanghai's industry development 'ten-five' program and the planning outline until 2015", this paper puts forward developing target and essential content of Shanghai's environmental protection industry development. This paper also analyses on the current status of environmental protection industry development around world, market demands and Shanghai's environmental protection industry.

The development of urban green space and its related industries in Shanghai (124)

This report checks the development of Shanghai open green spaces and its industry against their counterparts of the large foreign cities, refines their development experience in internal cities, and analyses their current situation and the existing problems of Shanghai. At the same it puts

forward the guide thinking, target and strategy to develop the Shanghai open green spaces in the new century, sets forth the relationship among the act, status and the industry. Suitable principles are to be pointed as well as the corresponding measures which including to set up the continuing idea of developing the city open spaces industry in the new century, strengthen the reform in its field, speed up its socialization, marketing and industrialization, improve its legal system, tighten up its management and attach important to fund raising and applying at developing the city green spaces.

Developing environment related industries based on multiple utilization of urban solid waste (148)

This paper studies on the multiple utilization of urban refuse and its industrial policy, and proposes that Shanghai should develop environmental protection industry oriented the multiple utilization of urban refuse based on the survey of the current status of Shanghai's urban refuse.

Eco-agriculture is the necessary choice for Shanghai's agricultural development in the new century (164)

Eco-agriculture was proposed as countermeasure to the disadvantages resulted from modern agriculture in 1960s. This paper suggests that Shanghai's implying agricultural sustainable development should be oriented by ecological principle to build up agricultural compound construction, according by the rule of resource recycle and en-

ergy transition within the ecological system. This paper also studies on the strategic reasons, essential content and relative countermeasures for Shanghai to develop its eco-agriculture.

Part Three: Supporting System for Developing Shanghai's environment related industries in the new century

On environmental law and policy system of Shanghai environment related industries (200)

As the basement for environmental protection industry, environmental legal policy attributes functions of instruction, standardization and security. Foreign developed countries have constructed environmental legal system and laid down massive economic spur policies to promote environmental protection industry development. China has decided to develop market oriented environmental protection industry since 1990s and has set up relative environmental legal policy system. Shanghai has accomplished lot on legal-policy system construction for developing environmental protection industry. However, for reaching urban developing target and bracing for the challenges and opportunities resulted from economy globalization and free trade, Shanghai must improve its environmental legal policy system.

Study on invitation of investment for Shanghai to develop its environmental related industries (230)

Seriously insufficiency of operation funds has been one of the bottlenecks for Shanghai's environmental protection industry development. This paper analysis on current status of Shanghai's environmental protection industry development, especially the challenges and opportunities for China to develop its environmental protection industry before and after China entry to the WTO, and invitation of investment with capital operation. Next, this paper points out countermeasures for conquering the problem of invitation of investment for environmental protection industry and explores to set up new system of Shanghai's invitation of investment for developing environmental protection industry based on the multi-level analyses of difficulties of invitation of investment for environmental protection industry.

On environmental technology support to environment related industry development (251)

This papers probes into the present situation of the relationship between technology modernization and environmental protection. Analyzes some important problems in this field for the purpose of realizing sustainable development in China. It is proposed that China should harmonious evolution of both mankind and nature. It is a foundation of practice and a key issue in the sustainable development of human society.

Green consumption and the development of Industries Related to Environment Protection in Shanghai (280)

Green consumption has become a world trend now. While China sticks to strategy of sustainable development, green consumption should be promoted too. Not just a new concept of consumption, green consumption will also encourage the development of a brand-new production mode, i. e. development of industries related to environment protection. For its economic and technological strength and environment capacity that has almost reached the limit, Shanghai plays a crucial role in China. In the process of encouraging the development of environment protection industries, Shanghai should and can play a special role, too. Starting with the status quo of green consumption in China and Shanghai, this paper looks closely at the special effects of green consumption on the development of environment related industries.

概述：超常规发展环境产业

进入 21 世纪,上海国民经济与社会发展十五计划已经提出要把环保产业作为未来支柱产业进行培育。这是上海提高城市绿色竞争力的重要举措和上海环境保护相关产业或环境产业发展的重大机遇。但是从当代可持续发展的理论看,简单发展传统意义上的环保产业是不够的。对此,我们在《2002 年上海资源环境蓝皮书》中提出了“超常规发展环境产业”的命题,希望能引发政府、企业、社会各界对下列四个方面的问题更具有战略意义的思考。

第一,对环境保护相关产业的認識需要深化

“环保产业”(Environmental protection industries)是国外在其早期或特定的产业内容条件下使用过的术语,然而,当今国际上对环境保护相关产业内涵更深刻的使用术语是“环境产业”(Environmental Industries)。环保产业强调的是发展环境治理产业,以防止环境破坏和污染治理来满足用户的环境需求;而环境产业不仅包括防止环境破坏和污染治理,还包括了正面利用生态环境效能的内容。(如无特别说明,本书中提及的环境产业即环境保护相关产业,以区别于传统的环保产业)

当代意义上的环境产业包括了环境产业化(污染治理产业化与生态环境产业化)与产业环境化两个方面的要求,按功能和技术特点大致可以归为四类:(1)面向末端污染控制的产业,即在生

产业链的终端通过物理、化学或生物技术实施环境破坏的控制与治理,包括政府对公共环境的治理和企业对自身环境的治理两个方面。(2)面向洁净生产技术的产业,即在生产过程中或通过产业链的延长(回收与再利用),减少与消除环境破坏。(3)面向绿色洁净产品的产业,即不仅要求生产过程中资源是高效利用的,不会或较少导致环境破坏,而且要求使用过程中也不会使用户或其周围环境受害,废弃后不会使接纳它的环境受害。(4)面向环境功能服务的产业,主要是利用环境资源向人们提供环境功能服务,如生态旅游、生态休闲、健身、人类生活区与生产区的环境景观设计与建设等。

一般来说,在现代化的进程中随着人们对环境保护与生态建设的关注与投入的加深,在环境产业中第一类产业逐渐趋于饱和,而其他三类则有无穷尽的发展,并逐步成为未来环境产业的主流。而目前我国的环境产业是相对狭义的环境产业,主要涉及环保产品生产、三废综合利用、环保技术开发与服务、自然生态保护和低公害产品生产等,属于传统的环境产业化的内容。由此可以看出,我国的环境产业大体处于“抵御性控制”层次,而发达国家的环境产业则已成为新技术创新的动力与新生产力的增长点。

根据上述,我们认为上海发展环保产业应该从狭义的环保产业层次扩展到广义的环境产业层次,这意味着下列三个有利于上海可持续发展的思想转折:一是发展环境产业不仅是为了保护环境,而且要开发和利用环境资源;二是发展环境产业不仅是发展抵御性的产业,而且要战略性地发展积极性的产业;三是发展环境产业不能只限于传统的第二产业,更要发展第三产业和第一产业中的环境产业。

第二,倡导以全面推进为特征的环境产业发展模式

当代发达国家环境产业的发展一般受到四种机制的驱动:一是政府为捍卫公众环境利益而制定的环境法规以及有关政策;二

是政府对公共环境事业的投入；三是环境对企业的成本一效益型驱动机制；四是社会大众对更高生活质量追求而形成的消费需求驱动机制。

在这些机制的作用下，发达国家环境产业的发展，明显地表现出时间上的阶段性和技术、结构上的层次性。这就是所谓的“三级跳”模式，即先发展前述末端治理类产业，然后再发展其他三种产业。具体地说，在以末端污染防治为主的初级阶段，上述第一类和第二类机制起主要作用，主要发展的是末端治理环境产业，正因为如此，人们一度将环境产业称为“政策驱动型产业”。但对末端治理的投入属于“抵御性支出”，它既不会提高国民生产总值，也不会提高国民收入；从成本一效益的角度看，企业应该选择新的、更为积极的环境投入方式，这就是第三类驱动机制，它导致洁净技术类产业的发展，将污染问题解决于生产过程之中；最后，第四类机制则引领环境产业发展的方向与潮流，随着公众整体环境意识的提高以及社会经济水平的发展，第三、第四类环境产业将会成为主流，使得环境与经济变为统一体。

应该看到，驱动发达国家环境产业发展的四种机制，对于当前我国的环境产业发展同样适用。我们认为，在启动上海 21 世纪的环境产业中应该优先考虑采取跨越式发展的方式，使四种机制和四种产业同时发展和全面推进，而不是简单采取“三级跳”的先后发展模式。要努力做到让政府对公共环境的治理与企业对自身环境的治理同时进行，让末端治理控制型产业、洁净技术型产业、绿色产品型产业、环境功能型产业同步发展，让国内环境市场的开拓与国际环境贸易齐头并举。

第三，通过建设环境科技产业园区推进超常规发展

我们认为，要使上海环境产业能够快速崛起，实施超常规、跨越式的发展，其重要机制就是建设环境科技产业园区，要通过布局、科技、产业、资金、政策的高度集中，促进上海环境保护相关产