

Practice and Reflection on Eco-City Construction of Yangzhou

Xu Hongxi



Yangzhou, located in the centre of Jiangsu Province, is a noted cultural city with a history of more than 2,500 years.

Yangzhou's natural environment is the blend of rivers, lakes and the land. It has 7 counties (cities) and regions, covers a total area of 6,638 square kilometers, and has a population of 4.58 million. Of the figures, urban population is 637,700 and urban built-up area is 70 square kilometers, with the level of urbanization reaching 49.2%.





In 2006, the GDP of Yangzhou reached 110 billion RMB, financial revenue reached 15.8 billion RMB, per capita disposable income of urban residents was 12,950 RMB and per capita net income of farmers was 5,813 RMB. Yangzhou is now in the mid-term stage of industrialization and accelerated urbanization process. Yangzhou's city size is not large, its economic strength is moderate, yet "Humanity, Ecological Rationality and Residential Suitability" are its three main characteristics.

春风十里扬州路
卷上珠帘总不如

On the Yangzhou Road for three miles in the breeze
Every pearl-screen is open. But there's no one like her.



One. Overall Situation of Eco-city Construction of Yangzhou



In 1999, we began to compile *the Eco-City Construction Plan of Yangzhou* while cooperating with Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences.

In 2000, the Chinese Government and the German Government confirmed the construction plan of a model eco-city in Yangzhou. And the cooperation term of technical assistance lasts for 5 years (starting from June, 2002)





In 2002, Xie Zhenhua (former director of the State Environmental Protection Administration) and Zhu Guangyao (deputy director) highly praised the ecological construction work while investigating in Yangzhou, saying that Yangzhou, as a historic city, not only has deep cultural roots, but also has very good practice in the ecological construction.

In the following years, in the process of building an all-round well-off society, and taking scientific development concept as the guiding principle, and eco-city as our goal, we constantly promoted industry restructuring, actively conducted clean production and recyclable economy pilot projects to enhance restructuring of traditional industries, implemented energy-saving and disposal reduction measures, improved comprehensive transformation of urban environment and environmental protection and accelerated the construction of an eco-city to fully demonstrate Yangzhou's characteristics of Humanity, Ecological Rationality and Residential Suitability.



Sewage Treatment Plant

江苏省扬州市

国家卫生城市

全国爱

国家

环境保护模范城市

国家环

二〇〇

授予：扬州市

国家园林城市

中华人民共和国建设部

二〇〇三年十二月

In recent years, we have won a series of honors, such as China Top Tourist City, National Sanitary City, National Environmental Protection Model City, National Civilized City, State Garden City, and China Residence Award. All the counties (cities) in Yangzhou as well as Hanjiang District have established national ecological demonstration zones and have realized the goal of “holistic greenery”.

Last year, owing to our outstanding achievements in old city protection and improvement of living environment, we won the United Nations Habitat Scroll of Honour Awards, which is the top honor in the field globally. The ancient culture and modern civilization reflect upon each other to further highlight the glorious city.



First, we introduced Sino-German Cooperation Project and conducted experimental work of Eco-City planning and construction. *The Eco-City Construction Plan of Yangzhou* won accreditation from experts invited by the State Environmental Protection Administration in Beijing, thus becoming the first Eco-City construction plan to be approved by state-level appraisal.



Second, we take the actual situation of Yangzhou into full consideration and actively carry out experimental work of ecological construction.



Riverside Plain

Compound Ecological

Zone, City Outskirts

Compound Ecological

Zone, Lakeside

Compound Ecological

Zone, Western Highland

Compound Ecological

Zone and Lixiahe River

Compound Ecological

Zone.



In Baoying County,
we established a
pilot base for organic
food to develop the
organic food
industry



In industrial parks such as the Economic Development Zone, we conducted the experimental work of ecological industrial park and recycling economy industrial park.



Third, We established a policy mechanism conducive to ecological construction.



- Always insist on enhancing comprehensive environmental and economic development decision
- Established an Eco-City construction leading team

- In 2001, the city party committee and the municipal government promulgated *the Decision on Strengthening Ecological Construction and Environmental Protection*
- In November, 2003, *the Decision on Eco-City Construction Plan of Yangzhou* was passed at the Fifth Session of the Fifth NPC Standing Committee of Yangzhou
- In September, 2004, *the Eco-City Construction Plan of Yangzhou* was officially promulgated by the municipal government
- Two municipal Eco-City construction conferences were held, and *the 2004 – 2005 Implementation Scheme of Yangzhou Eco-City Construction Plan* and *the Action Plan of Yangzhou Municipal Construction (2006 – 2010)* were promulgated

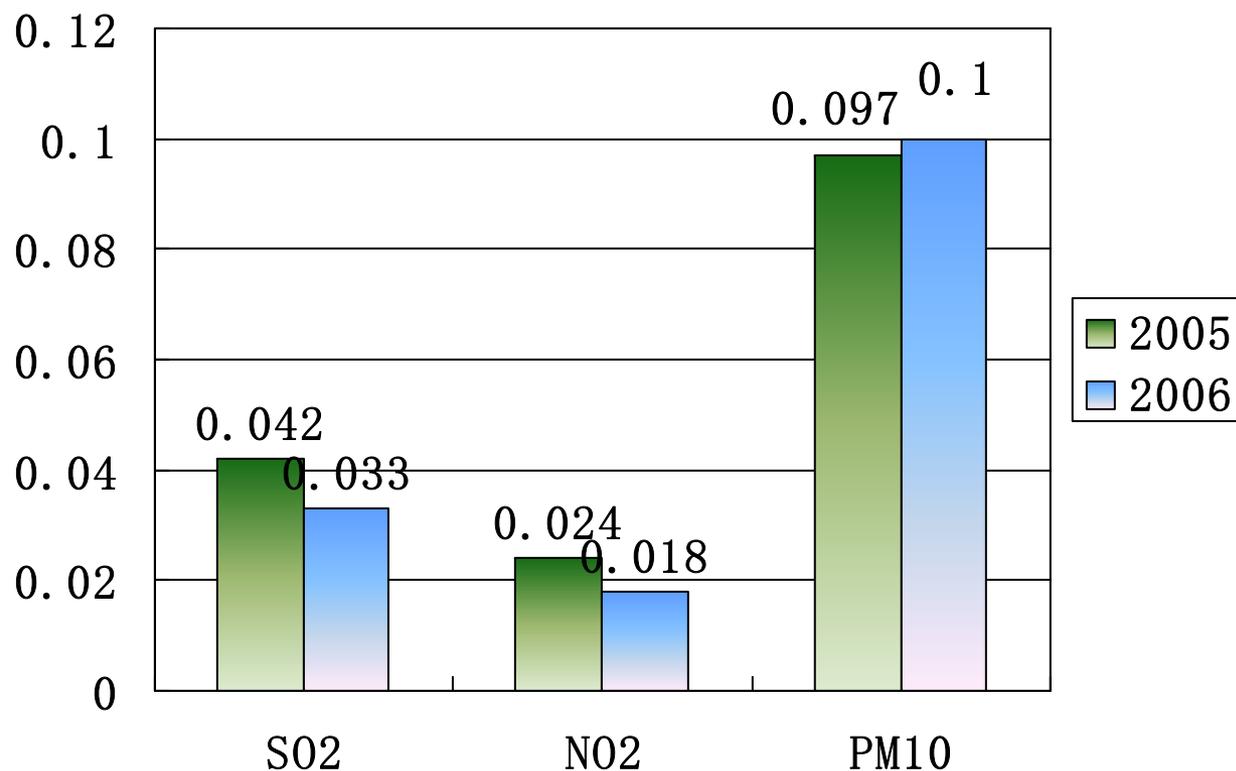
We have invested (or plan to invest) nearly 30 billion RMB in implementing 148 (ten major categories) and 112 (ten major categories) key projects respectively, strongly pushing forward the Eco-City construction work.



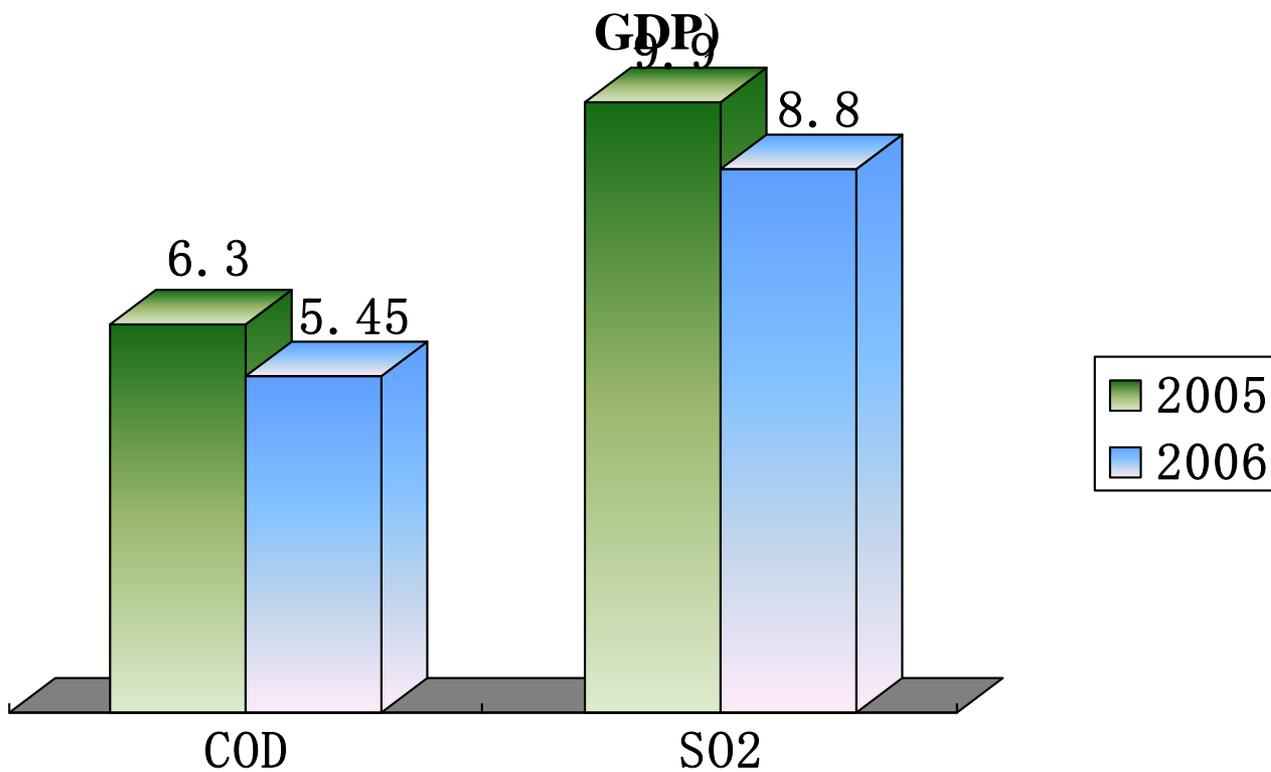
Evident effect is achieved in ecological construction

- In 2006, standard rate of urban drinking water quality reached 100%, the main stream of the Yangtze River basically maintained Second Class water quality, and the pass rate of river monitoring section planes improved by nearly 9 percentage points over last year.
- Compared with the situation during the “Ninth Five-Year Plan” period, Yangzhou City’s particle concentrations in the air has reduced by 46.1%, the concentration of nitrogen dioxide has reduced by 42.91%. In 2006, the days with good air quality in urban areas reached 318 days, and air quality reached the secondary standard.
- Urban sewage treatment rate improves from 14.4% of the “Ninth Five-Year Plan” period to the current 71%.
- The city’s per 10 thousand RMB GDPCOD and SO₂ emission intensity have decreased by 0.86% kg and 3.58 kg respectively compared with that of the year 2000. In 2006, the city’s energy consumption per unit GDP decreased by 3.8%, and chemical oxygen demand (COD) reduced by 4.1% and total emission volume of sulfur dioxide reduced by 3.7%.

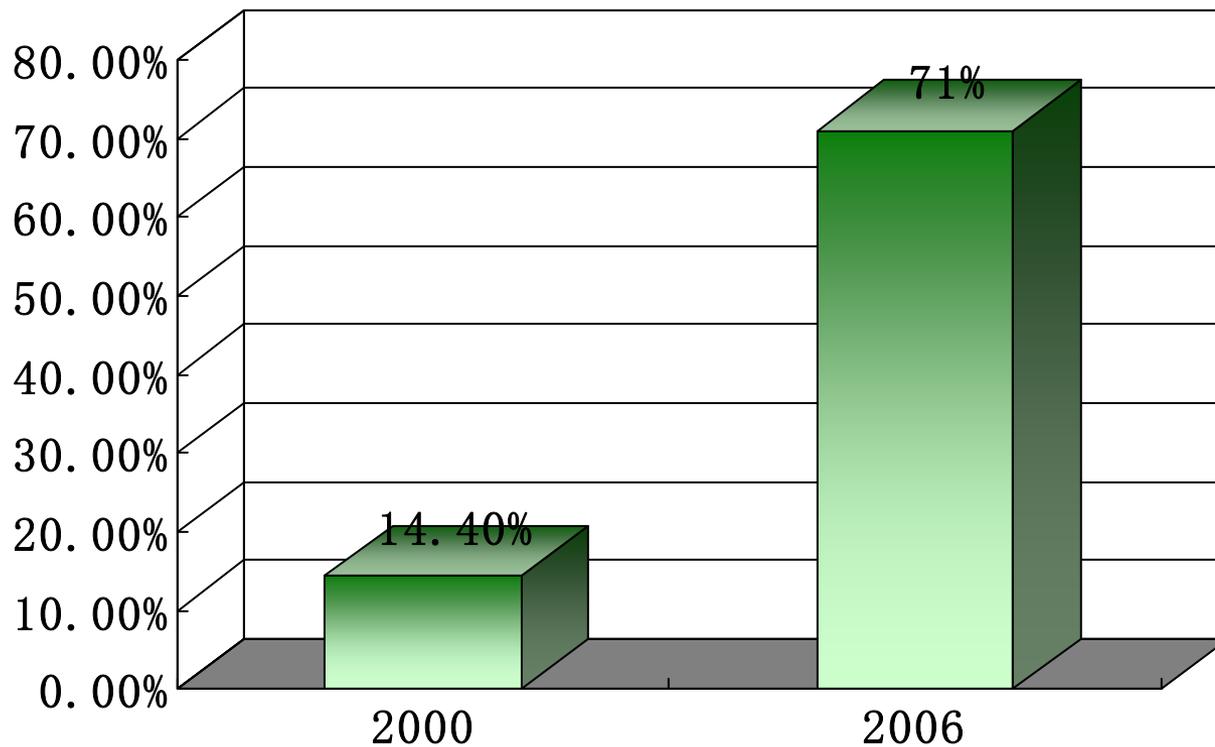
Urban Air Quality Continues to Improve



Emission Rate of Pollutants (per 10000 yuan



Concentrated Sewage Treatment Rate



Improvement in environmental quality enhances the city's synthetic competitive ability.

- Our city has won the honor of “**Recommended Mainland Investment Destination for Taiwan Businessmen**” in several consecutive years.
- In the “List of Chinese Cities with Highest Investment Returns for Transnational Companies (2006)” jointly released by Chinese Academy of Social Sciences and China Business Weekly, Yangzhou ranks among the top 20, and is one of the top three Chinese cities having the biggest investment potential.

On March 25, 2007, in the Blue Book of Chinese Cities' Competitiveness released by Chinese Academy of Sciences, Yangzhou jumped from last year's No. 51 to this year's No. 45. And “Environmental Competitiveness”, “System Competitiveness” and “Government Administration Competitiveness” all rank among the top 10.



According to the newly released test results of the process of building an all-round well-off society in Jiangsu Province (2006), Yangzhou's green space ratio and environmental quality comprehensive index rank first in the province, and well-off society environmental quality comprehensive index has reached 82.6, which has reached and surpassed the 80-point requirement of "environmental quality comprehensive index" in the all-round well-off society index of Jiangsu Province.

I would prefer to live in Yangzhou, with willows on river banks and spring breeze brushing my face.

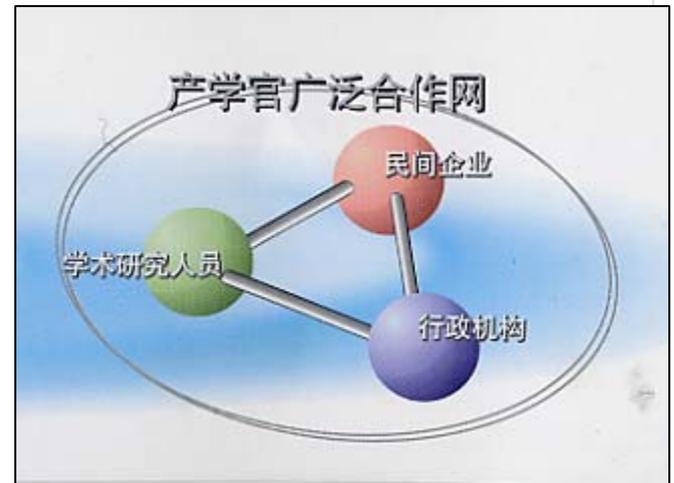
人生只爱扬州住
夹岸垂杨春气熏

Two. Main Practice and Experience in the Eco-City Construction



1. Firmly grasp the essence of Eco-City construction and guide the work with scientific development concept.

The Eco-City is a modern prefecture-level administrative region established according to ecological principle, with harmonious social, economic and natural development, efficient utilization of materials, energy and information, and benign ecological cycle.



The essence of Eco-City is harmony, continued high efficiency and regional symbiosis.

- Focus on changing the mode of economic growth, city development and traditional way of life and consumption
- Strive to make the economic and social development compatible with the bearing capacity of resources and environment, and make the population size and quality compatible with production development
- Make social and economic development more comprehensive, coordinated and sustainable

Two. Take coordinative and scientific development as the starting point and focus on coordination degree

First, create a favorable environment.





Northwest Section of Freeway Round Yangzhou City





Runyang Bridge



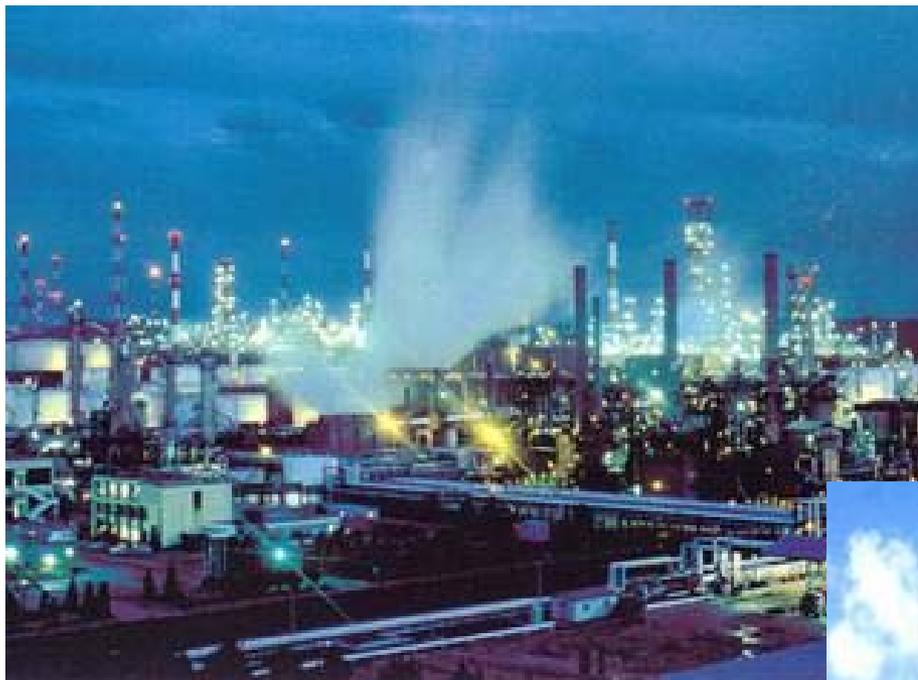
Second, seek a win-win situation in industry structure adjustment. Achieve centralized control of pollution and also a win-win situation of both economic development and environment optimization.



Riverside park of Yangzhou and other parks accumulate 85% of all capital and 80% of overall economic development.

Yangtze River Industrial Park





Yangzhou Chemical Industrial Park



Third, actively promote such environmental technology as circular economy, clean production and ISO14000, and enhance the transformation of economic growth mode with environmental technology.



- Since 2002, a total of 522 enterprises have achieved clean production. In 2007, we plan to implement clean production in 142 enterprises, and implement mandatory clean production in 13 heavy pollution or unstable enterprises.
- Until the end of 2006, 70 enterprises have passed ISO14000 certification, and there are a total of 13 provincial-level circular economy pilot enterprises and 4 provincial-level circular economy model enterprises.

Yangzhou is also actively engaged in the experimental work of ecological industrial park and recycling economy industrial park.



3. Highlight focal and difficult points, adhere to key issues and focus on harmony.



Rural ecological and environmental protection is the focal and difficult point in our city's Eco-City construction.

Of the Eco-City construction indexes, the biggest obstacles for our city are National Environmental Elegant Town and urban sewage treatment.



We firmly seize the key problem of urban sewage treatment, and have proposed different construction mode of town-level sewage treatment plants according to the actual situation.



Towns beside cities can treat sewage collectively by accelerating pipeline network construction and expanding the service range of urban sewage treatment plants.





Relatively better developed towns can achieve industrialized sewage treatment by building town-level sewage treatment plants in industrial zones.



Towns and villages with relatively decentralized population and less pollution can treat residential sewage through building decentralized or relatively centralized ecosystems like small scale and simple artificial wetlands.



4. Respect the rule and make steady progress. Do not be impatient for success.

In the Eco-City construction process, Yangzhou carries out a variety of projects in a planned and systematic manner in accordance with planning requirements, and has achieved good results.

- In 2002, Yangzhou City became a National Environmental Protection Model City, all the counties (cities) in Yangzhou as well as Hanjiang District have established national ecological demonstration zones and have realized the goal of “holistic greenery”.
- Recently, according to *the Action Plan of Yangzhou Eco-City Construction*, we are making efforts to enhance the construction of “Model City” and National Environmental Elegant Town in all counties (cities). We put much emphasis on the “**Cell Engineering**” of Eco-City construction, and push forward the construction work in an orderly manner by combining short-term and long-term goals, as well as annual and general objectives.

5. Be people-oriented and result-oriented. Dedicate to improving environmental quality and people's satisfaction.

Regional environmental quality is the most basic and intuitionistic factor in assessing the level of Eco-City, and it is also the starting point when people evaluate the Eco-City.





Sewage Treatment Plant



Garbage Landfill



Yangzhou Medical Waste Treatment Center

Yangzhou is people-oriented and result-oriented. We create urban environment with completely new concept and focus on the distinctive characteristics, essence and taste.



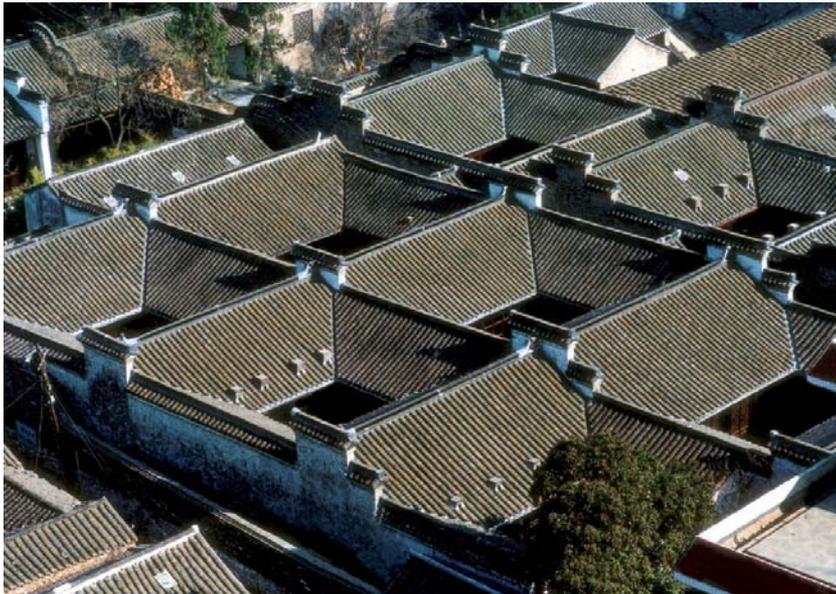
天下三分明月夜
二分无赖是扬州

If there are three parts of moonlight in the world, and the two parts of the moonlight are in Yangzhou.



Three. Outlook of Yangzhou's Eco-City Construction

According to national eco-city assessment criteria, Yangzhou has reached 10 of the 28 indexes, and 18 of them are still below the standard. The biggest obstacles are as follows: 80% of the towns should be built into environmental elegant towns, urban waste water treatment rate should reach 70%, annual per capita GDP should reach 33,000 RMB, per capita budgetary revenue should reach 5,000 RMB, farmers' annual net income should reach 8,000 RMB. To meet these criteria, we still need to redouble our efforts.



First, sturdily fulfill this year's pollution control task and ensure that the total emission volume of sulfur dioxide and COD further reduce 3.1% and 3.7% respectively over last year so as to maintain Yangzhou's economic development.

This year, the city has started constructing sewage treatment plants or transmission pipeline network in 10 towns in order to make urban waste water treatment rate increase 5 percentage points over 2006. Meanwhile, we have conscientiously strengthened air pollution control, supervised de-sulfur project construction such as Yangzhou Power Plant, Yangzhou No. 2 Power Plant and Yizheng Chemical Fibre Co. and fulfilled the elimination and demolition work of 50 backward boiler and chimney plants.



Second, work together to vigorously implement the construction of Environmental Protection Model City and National Environmental Elegant Town. This year, two of Yangzhou's county-level cities ---- Jiangdu and Yizheng, have passed assessment of National Environmental Protection Model City by the State Environmental Protection Administration, and Gaoyou City has passed provincial assessment.



Jiangdu City

Third, strengthen pollution control project management and ensure meeting regulatory requirements. Accelerate pipeline network construction, ensure normal operation of every sewage treatment plant, make sewage collection rate and treatment rate reach national standards, collect and treat sewage from all economic development zones and industrial parks. Medical waste from hospitals above town level should be collected and receive harmless treatment at Yangzhou Medical Waste Treatment Center.



Gaoyou Sewage Treatment Plant



Medical Waste Transporting Vehicles

Fourth, strengthen law enforcement and crack down on environmental violations. Complete environmental campaign on 188 chemical enterprises in Yangzhou, conduct in-depth regulatory campaign on 159 centralized drinking water sources. Strengthen investigation and treatment of environmental violations, and penalty rate, correction rate, law enforcement rate and terminated rate of 12 “malice or willful violations” reached 100%. Establish and improve an advanced environmental monitoring early warning system, a comprehensive law enforcement and supervision system as well as integrated pollution control system.



Fifth, strengthen environmental management and take comprehensive measures to prevent new environmental problems. Effectively implement compilation and approval of environmental impact assessment targeting industrial zones in 60 townships of Yangzhou. Strictly implement all relevant laws, regulations and industrial policies, and explicitly reject newly submitted heavy pollution projects. Strictly carry out “Three Simultaneities” system as well as tracking and inspection system.



Sixth, vigorously promote clean production and develop circular economy. Strengthen the implementation of circular economy, clean production and attestation of ISO14000. Carry out eco-industrial park development plan in municipal Economic Development Zone, and conduct ecological demonstration park planning in Yangzhou Chemical Industry Park.



Jiangsu Yangnong Chemical Group Co.Ltd

- Eco-City construction is not an image project
- Eco-City construction cannot be completed all at once
- Eco-City construction is not a match of city construction



We will seek to develop with ecology in mind and promote ecological construction with ecological concept. Trough down-to-earth solid work and wholehearted tireless efforts, we will actively explore an ecological construction mode suitable for such medium-developed areas as Yangzhou, and strive to build Yangzhou into a national ecological city ahead of schedule in 2010.



A scenic view of a traditional Chinese garden. In the foreground, a calm lake reflects the sky and the surrounding architecture. On the left, a large, ornate pavilion with a dark roof and white columns stands on a small island. In the center, a stone bridge with a single arch spans the water. On the right, another pavilion with a curved roof is visible, surrounded by lush green trees. The sky is bright blue with scattered white clouds. The word "Thanks" is written in large, bold, yellow letters across the middle of the image.

Thanks

Yangzhou Environmental Protection Bureau