



# **Scientific Outlook on Development and Sustainable Development in China**

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# 1. sustainable development is the basis national policy of China.

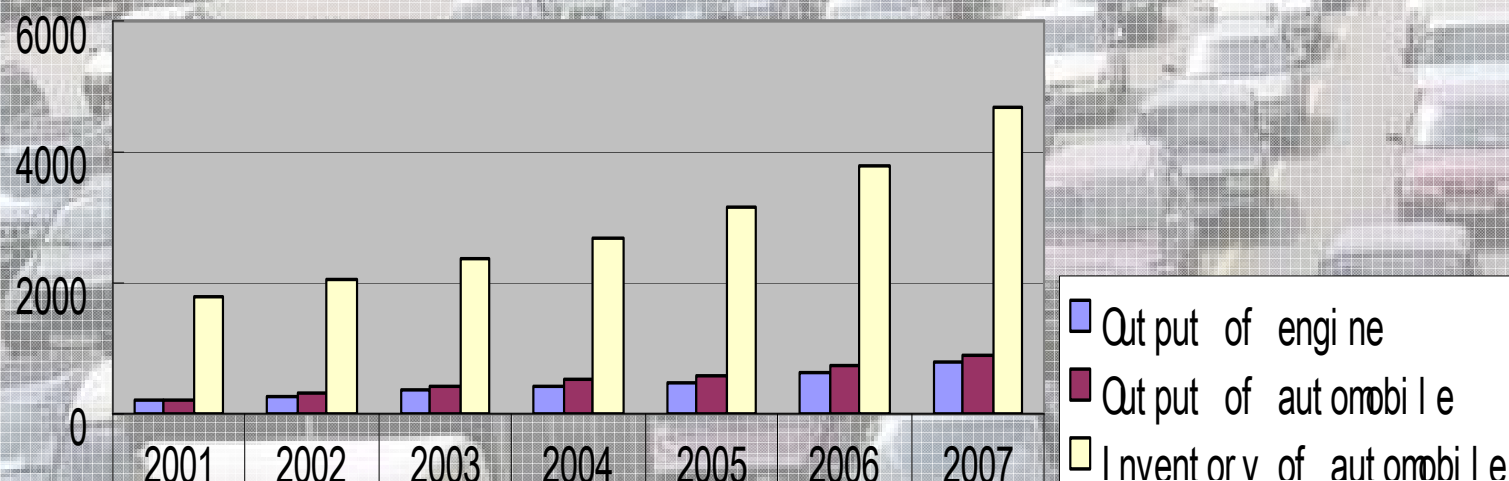
China boasts the biggest developing country and enjoys high economic growth rate in the world. Coupled with industrialization, urbanization and modernization, China is encountered with great pressure in environment and natural resources








# Output of engine, Output of automobile and Inventory of automobile in China from 2001-2007



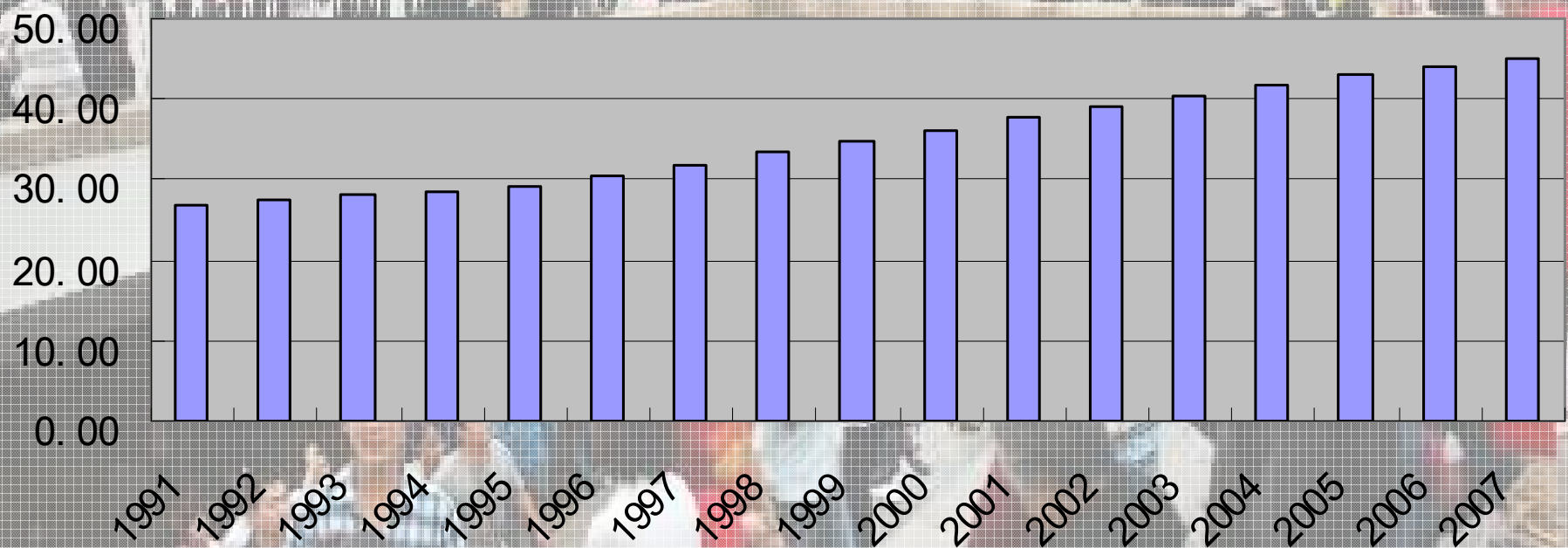
	2001	2002	2003	2004	2005	2006	2007
Output of engine	186.74	250.79	384.81	428.57	471.07	627.09	784.67
Output of automobile	234.15	325.37	444.35	507.05	570.77	727.97	888.24
Inventory of automobile	1802	2036	2383	2694	3160	3800	4689





**At present, there are 655 cities in China, among which 122 of them has a population over one million. In the coming 10 to 20 years, there will be 15 million immigrants moving from rural areas to cities which consequently will exert more pressure upon city cluster area in the aspects of energy, natural resources and environment indexes.**

## China's urban population share of the total population from 1991 to 2007



**cnsphoto**

**Early in the year 1994, the central government of China enshrined the goal for the sustainable development of cities in “The 21st Century Agenda of China” which reads to develop cities characterized with proper planning and layout, full-fledged supporting facilities, convenient to work and life, noise-free, clean and habitability.**

**In 1996, China has officially incorporated sustainable development into its national development strategy.**

**In 2003, the concept of Scientific Outlook on Development was raised.**

**On this September, Chinese president Hu Jintao reiterated, on the occasions of UN Series Summits and G20 summit, that China will continue to attach great importance to and actively promote the concept of Scientific Outlook on Development which upholds putting people first and overall coordination, and to build energy-saving and environment-friendly society and innovation-oriented country.**



# China's Sustainable Development Strategy.

**Guided by scientific outlook on development, directed by balanced growth between urban and rural areas, with coordinated development between different sized cities and small towns as center principle, systematology features in exploring the essence and the evolutionary rule of sustainable development. Moreover, based upon the logic self consistency among development degree, coordination degree and sustainability degree, it deducts the space time coupling of sustainable development orderly and the correlative and interactive relationship among the above-mentioned three parts. It also establishes a unified explanatory basis and quantitative evaluation rule for relationship between man and nature, people and people.**





# The goal of sustainable development

By 2020 , Energy and natural resource consumption of the per capita GDP will be reduced obviously comparing with 2005.

By 2020 , The non-petrochemical energy accounts for 15% of the primary energy consumption.

By 2020 , The forest area will increase by 40 million hectares comparing with 2005 and forest stock volume will increase by 1.3 billion cubic meters.

A well established system comprising green economy, low-carbon economy and circular economy will be formed. Weather-friendly technology will be applied widely and the accumulated efficiency of social wealth will be greatly enhanced.



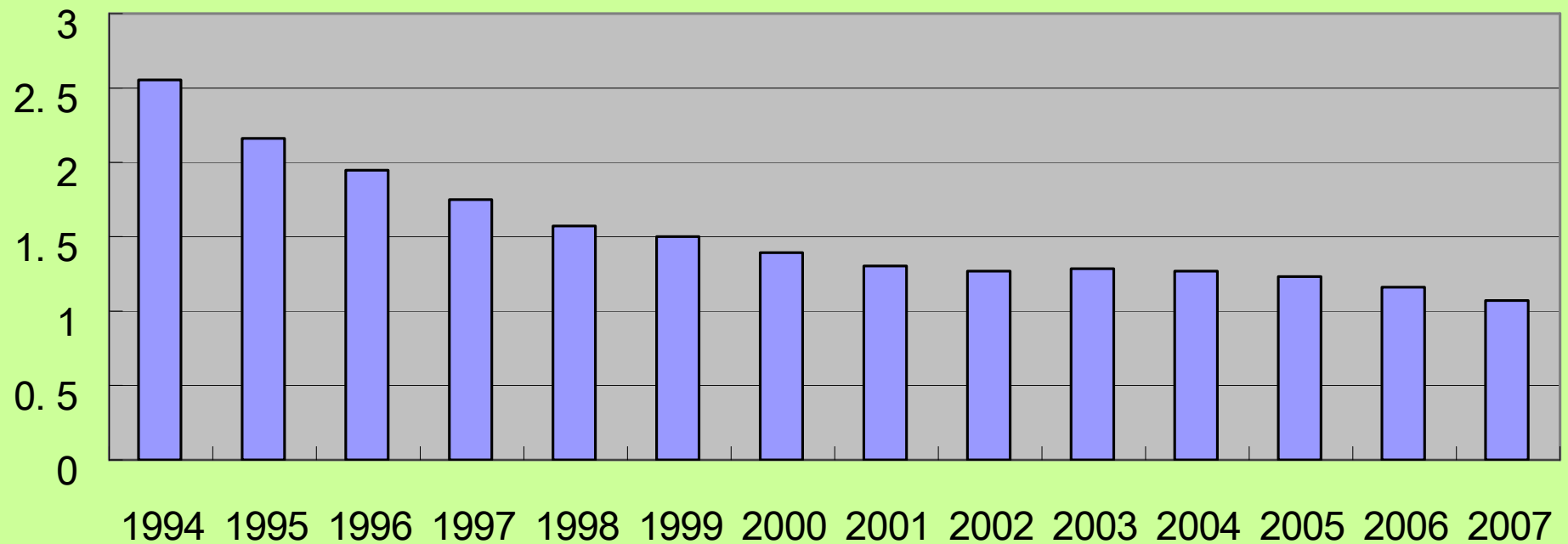
## **2. China's achievement in sustainable development**

### **In the aspect of energy emission reduction.**

**Since the Eleventh-Five year plan, the emission of sulfur dioxide and chemical oxygen demand lower by 8.95% and 6.61% respectively. In the first half of 2009, several binding indexes like energy consumption for every ten thousand yuan worth of GDP, sulfur dioxide and chemical oxygen demand have lowered respectively by 3.35%, 5.4% and 2.46%. And we have saved a grand total of 290 million tons of standard coal and a reduced emission of 660 million tons of carbon dioxide.**

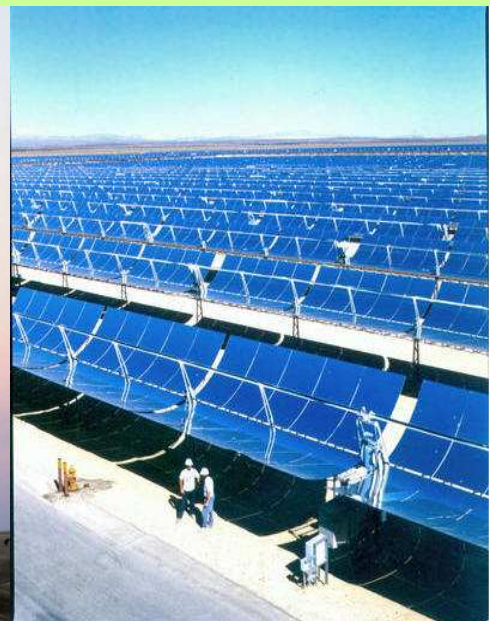


## The ten-thousand GDP energy consumption in China from 1994 to 2007

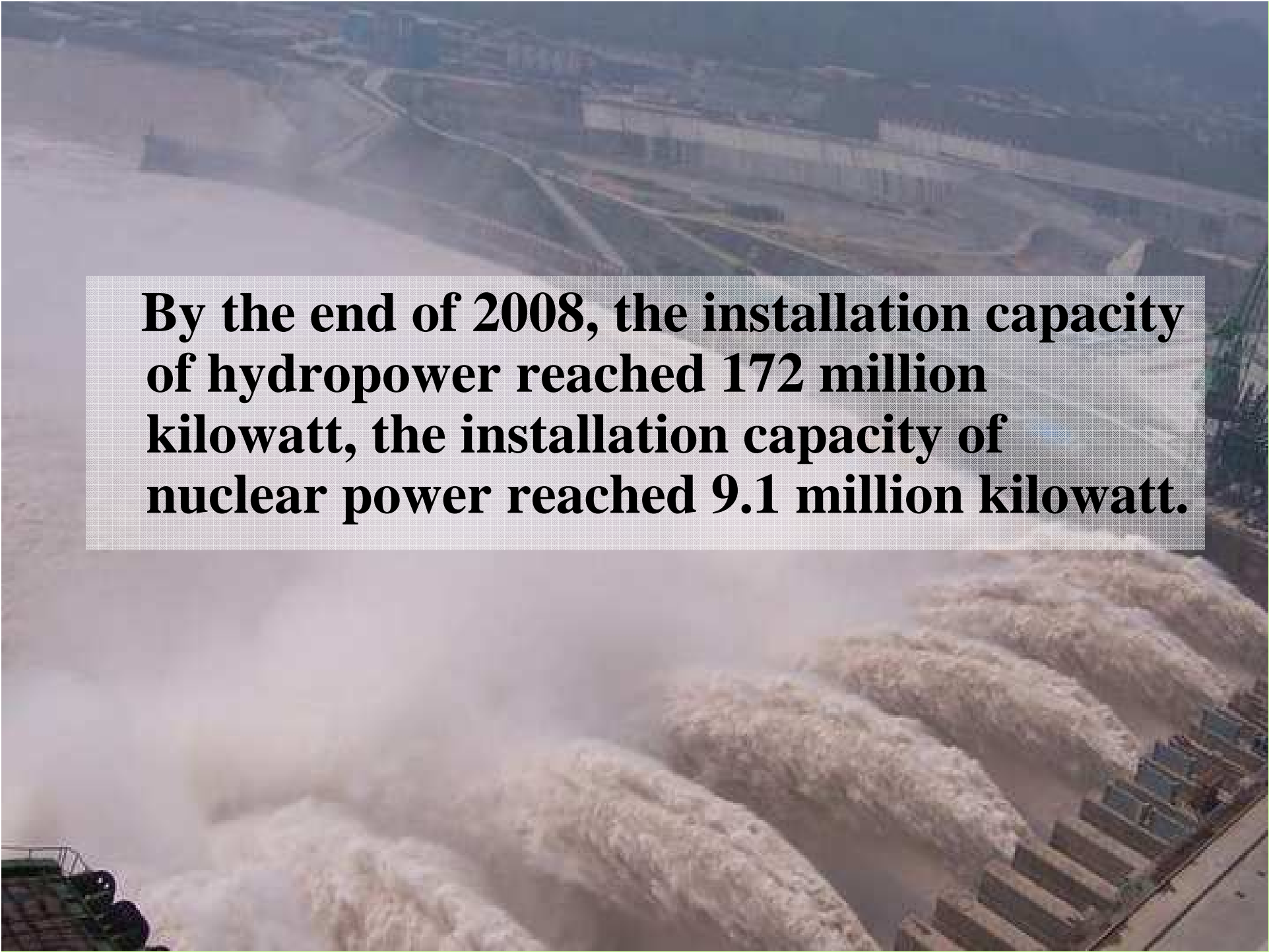


**In the aspect of utilizing new energy and recyclable energy.**


**The recyclable energy takes up 9% of the primary energy.**





An aerial photograph of a massive dam structure. The dam is a long, grey concrete wall stretching across the frame. Below the dam, several large spillways are visible, with thick, white water cascading over them, creating a misty spray. The surrounding landscape is hilly and appears to be under construction or development, with various roads and structures visible in the background.

**By the end of 2008, the installation capacity of hydropower reached 172 million kilowatt, the installation capacity of nuclear power reached 9.1 million kilowatt.**



**the installation capacity of wind power reached  
12.1 million kilowatt and the installation capacity  
of bio-energy reached 2 million kilowatt**





**The production capacity of solar energy photovoltaic cell reached 2 million kilowatt.**

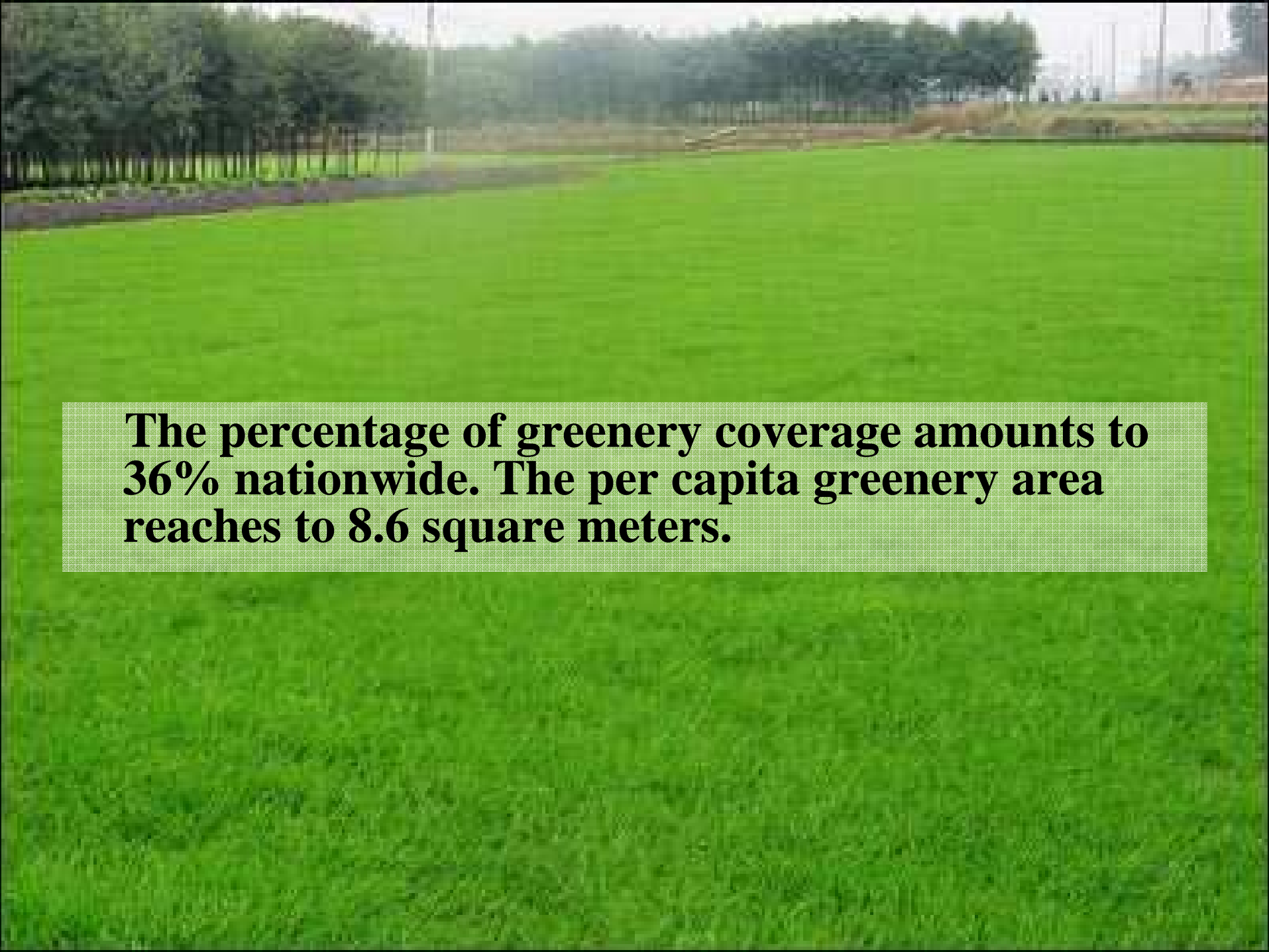




## **In the aspect of ecological protection**

**China implements a large scale forestry ecological project which enables the saved area of forest plantation to 540 million hectares, the stock volume to 1.505 billion cubic meters. Forestry area nationwide reaches 174.91 million hectares. The forest coverage reaches 20%.**



A wide, flat green field, possibly a lawn or a sports field, with a line of trees in the background. The field is a vibrant green color. In the background, there is a dense line of trees and some utility poles. The sky is overcast and grey.

**The percentage of greenery coverage amounts to 36% nationwide. The per capita greenery area reaches to 8.6 square meters.**



# **In the aspect of circular economy development**

**Currently, there are 30 national level ecological industrial model park and 178 pilot enterprises are listed for circular economy. Near 4000 enterprises have passed the examination of clean production.**



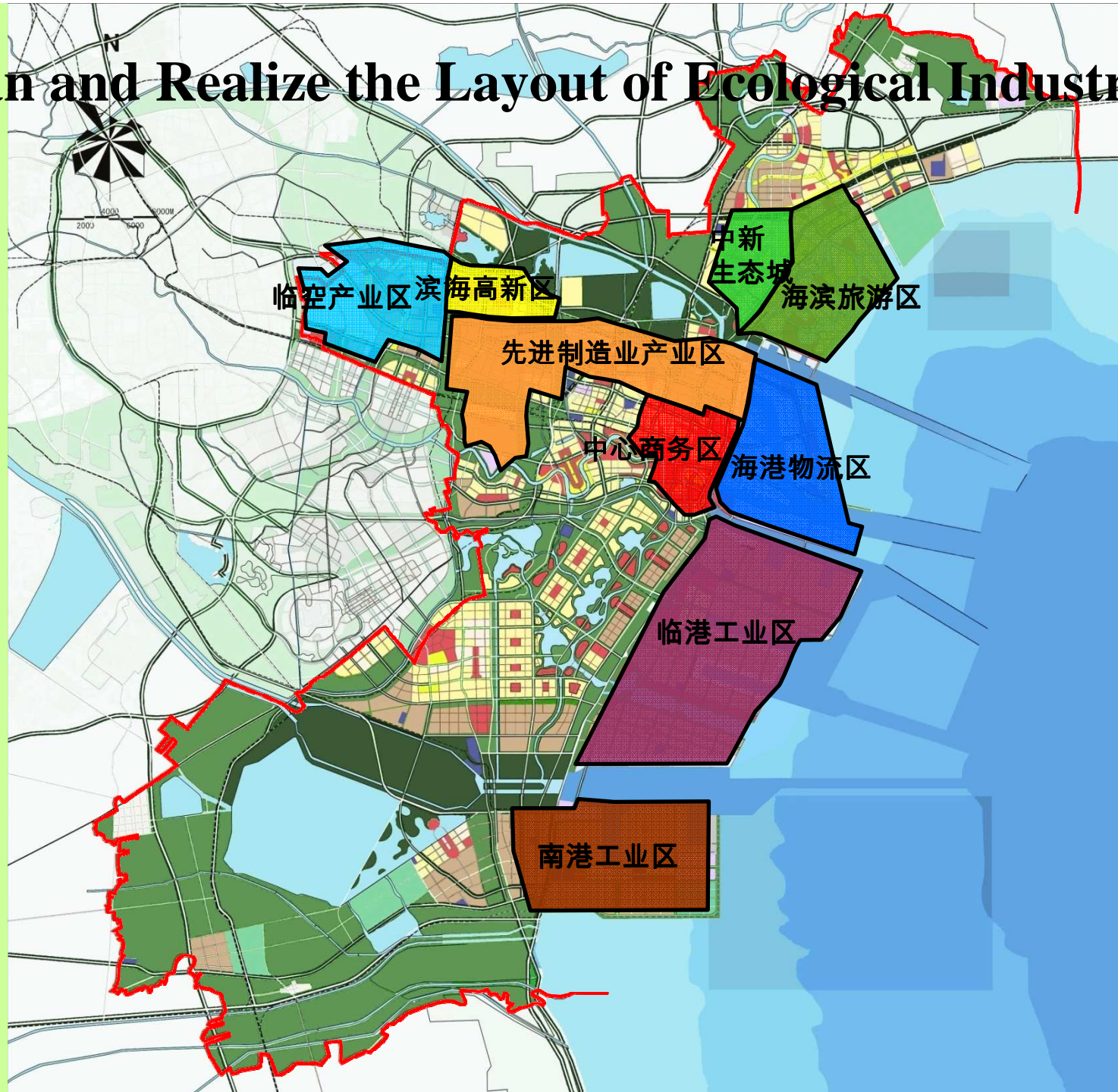
### 3. TBNA is the Pilot Area for China's Sustainable Development

Tianjin Binhai New Area (TBNA for short) is a new economic growth pole to power the engine of China's regional development in the new century, as well as the pioneer of implementation of scientific outlook on development.

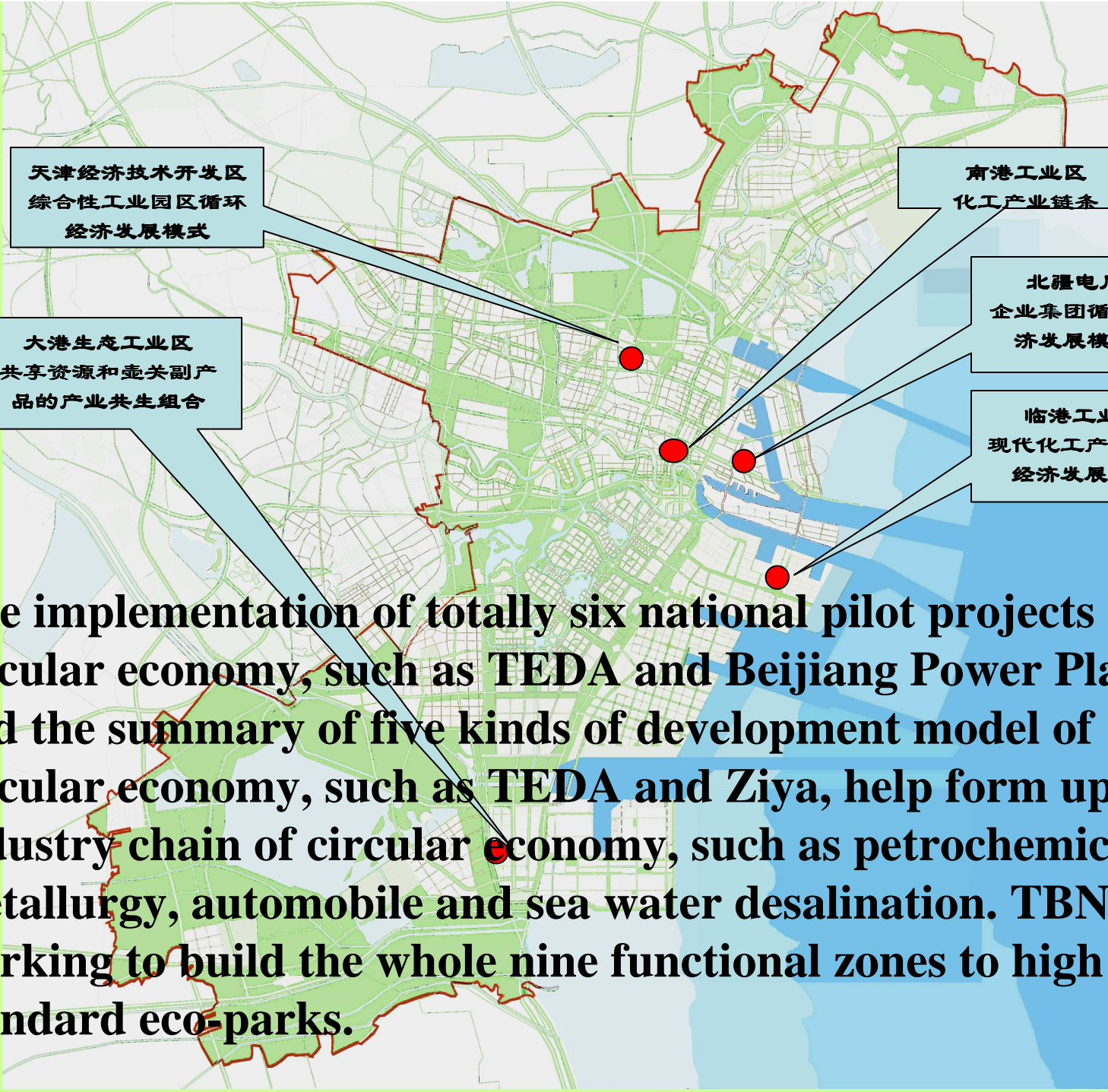




# Plan and Realize the Layout of Ecological Industry







天津经济技术开发区  
综合性工业园区循环  
经济发展模式

大港生态工业区  
共享资源和壶关副产  
品的产业共生组合

南港工业区  
化工产业链条

北疆电厂  
企业集团循环经  
济发展模式

临港工业区  
现代化工产业循环  
经济发展模式

The implementation of totally six national pilot projects of circular economy, such as TEDA and Beijiang Power Plants, and the summary of five kinds of development model of circular economy, such as TEDA and Ziya, help form up the industry chain of circular economy, such as petrochemical, metallurgy, automobile and sea water desalination. TBNA is working to build the whole nine functional zones to high standard eco-parks.

# Accelerate the Promotion of Industrial Innovation Capability

Has erected eight pillar industries, including aviation and aerospace, IT, automobile and equipment manufacturing, petroleum and marine chemical, modern metallurgy, biopharmaceuticals, new materials and new energy

Biodegradable plastic PLA(Polylactic acid)  
ORiO does not pollute the environment  
as it is made from environmentally friendly  
biodegradable plastic PLA (Polylactic acid).

Flexible LCD touch screen



SIDE



BACK

The words of song

High performance MIC



SIDE



BACK





**TBNA is taking leaps forward on the road of new type industrialization and innovation driven by internal impetus.**

state-level and provincial level engineering centers	50
various R&D centers	150
post-doctoral programs	52
the output value from high-tech industry accounted of the total industrial output	47%

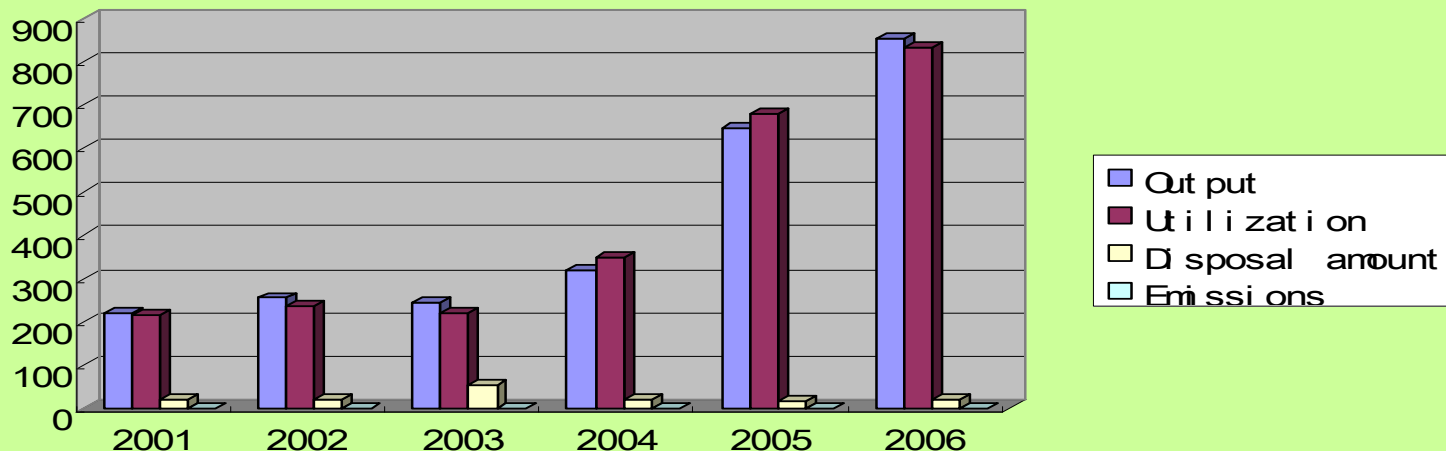




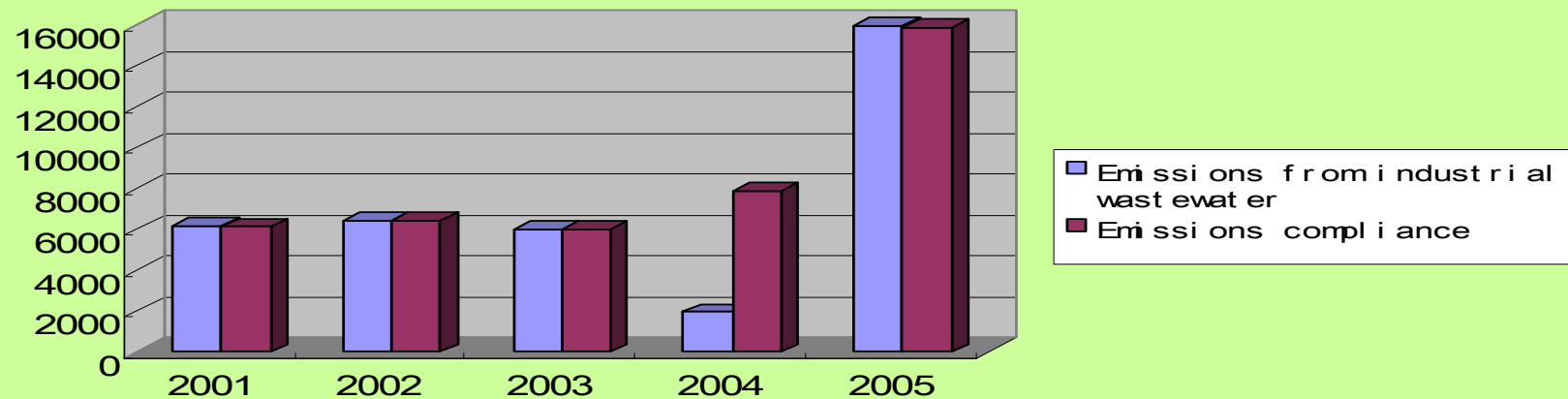
# Attach Great Importance to Energy Saving and Emission Deduction

•TBNA focuses on the implementation of water and air environmental remediation, solid noise and radiation pollution prevention and control, etc. totally six major categories and 85 key projects, with total investment of 14 billion RMB.

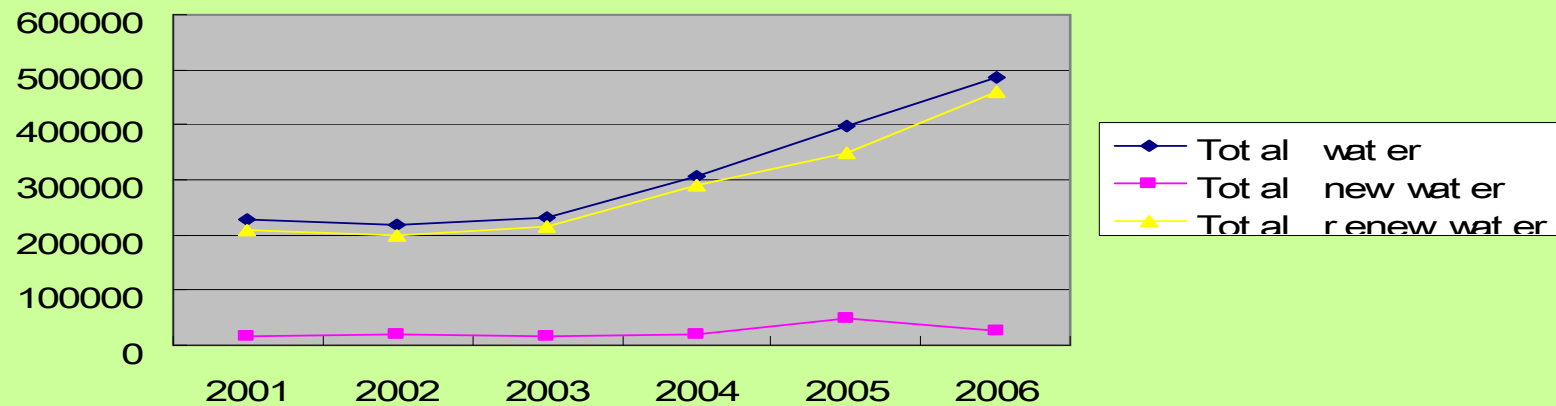
The output, utilization, disposal amount and emissions of industrial solid waste in TBNA



## Emissions from industrial wastewater in TBNA from 2001-2005



## Industrial utilization of water in TBNA from 2001 to 2006



**China's first Emissions Rights Exchange was established in TBNA, and finished the first transaction of 500,000 tons of sulfur dioxide emission. This has paved a way to control environmental pollution through market-based instruments and financing innovation.**

**The declining rate of energy consumption on every GDP of 10,000 RMB has always been at the front line accross the country. There are always over 320 days when the air quality over level two.**

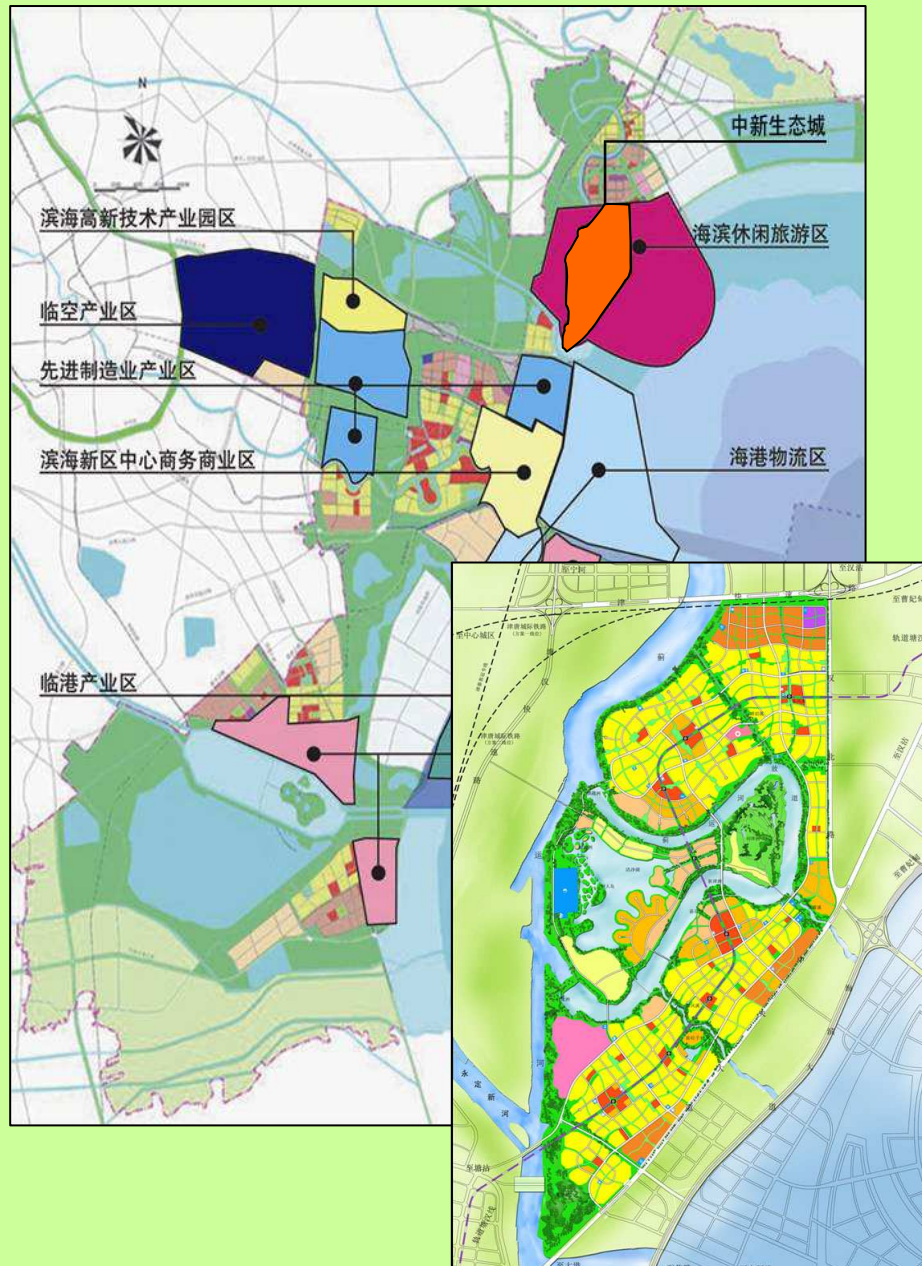




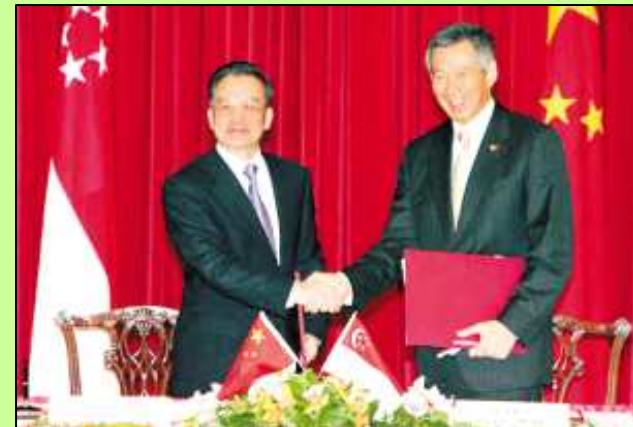




# Comprehensively promote the ecological construction.



**Sino-Singapore Tianjin Eco-city** is trying to establish a new model for human habitation with social harmony, economic efficiency and ecological virtuous circle.





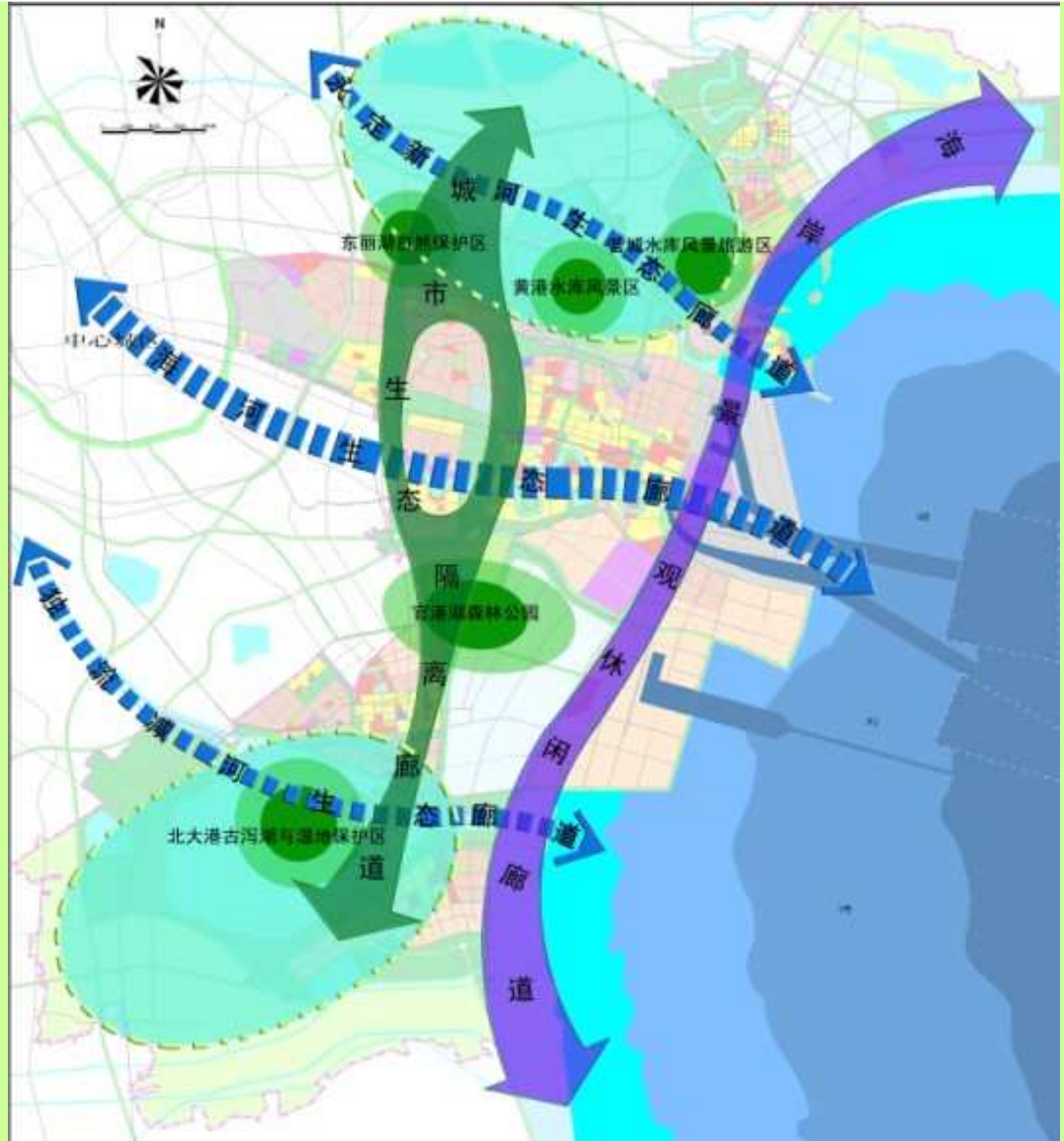
**Totally 500 square kilometers ecological wetland in southern and northern parts of TBNA has been constructed and preserved.**

**The high-standard green belts along the rivers, the highways and the industrial functional zones have been planted.**





A large-scale integrated environmental remediation has been carried out



**The opening-up and development of TBNA is an epitome of China's sustainable development. China's sustainable development has been carried out across-the-board and been promoted actively. We are strongly confident that, with the theory direction of scientific outlook on development and strong support from the world and joint effort of people across the country, China's economic society will be absolutely developed sound and fast.**



A photograph of a field of white dandelions in bloom. The flowers are small and numerous, scattered across a lush green field. The background is a soft, out-of-focus green, creating a sense of depth. The text "THANK YOU" is overlaid in the center in a bold, black, serif font.

THANK YOU