



DEVELOPMENT OF ECOLOGICAL CIVILIZATION – CHINESE EXPRESSION FOR SUSTAINABLE DEVELOPMENT

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Outline

- Development of ecological civilization: Chinese expression for sustainable development
- Strategy, measures and policy of China's development of ecological civilization
- Achievements of China's development of ecological civilization
- The outlook of China's development of ecological civilization in the "13th Five-Year Plan"

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Development of ecological civilization:
Chinese expression for sustainable
development



1. Framework

In 2012, the Chinese government formulated the “Five in One” strategic layout of the development of ecological civilization, economy, politics, culture and society



Targets

- Reversing the trend of ecological deterioration from the source
- Creating a good environment for production and living
- Making contribution to international ecological safety

Principle

- Adhering to the basic state policies of resource conservation and environmental protection
- Giving priority to saving, protection and natural restoration

Approaches

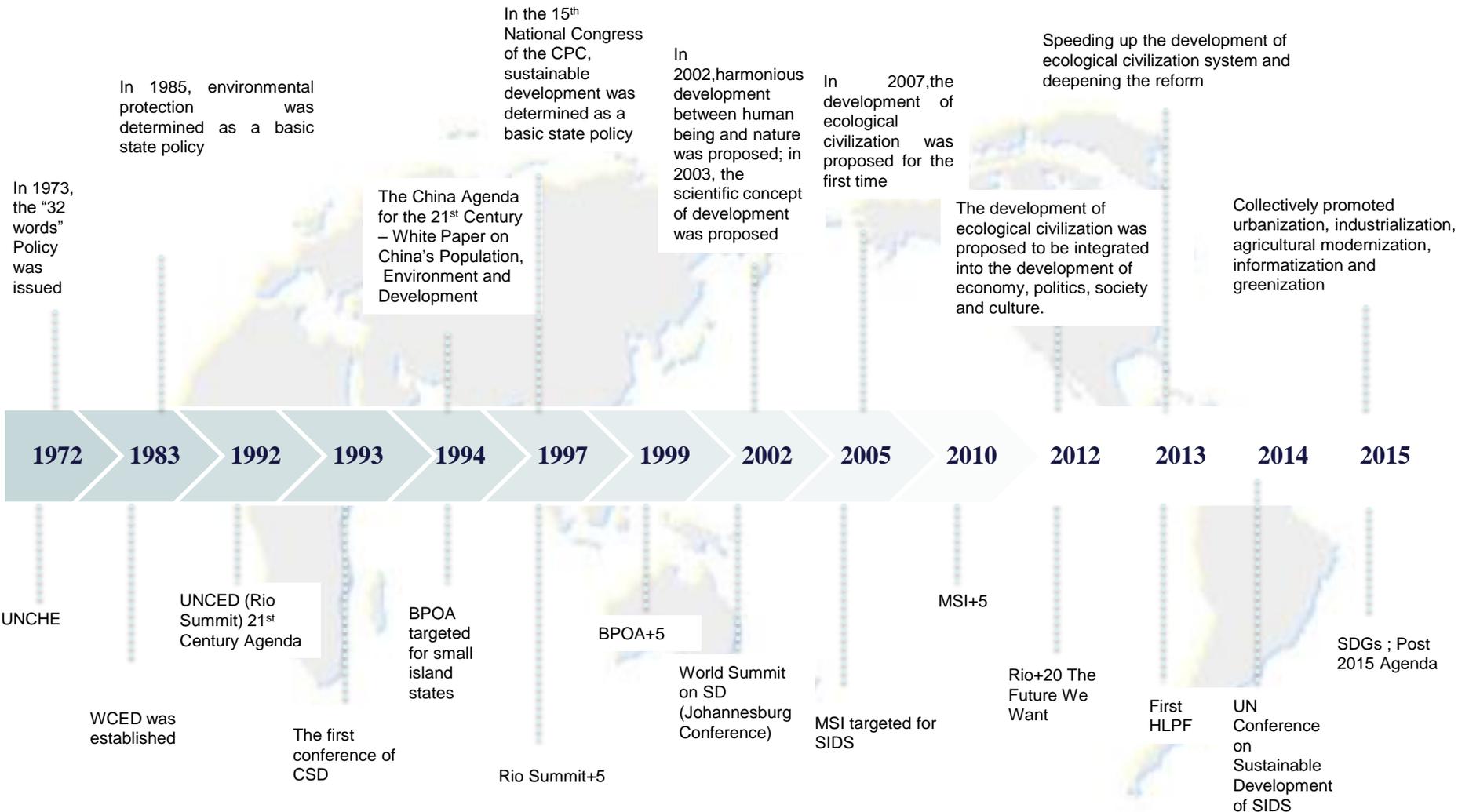
- Promoting Green, Recycling and Low-carbon development
- Forming a spatial pattern, industrial structure, production method and lifestyle featured by saving resources and protecting environment

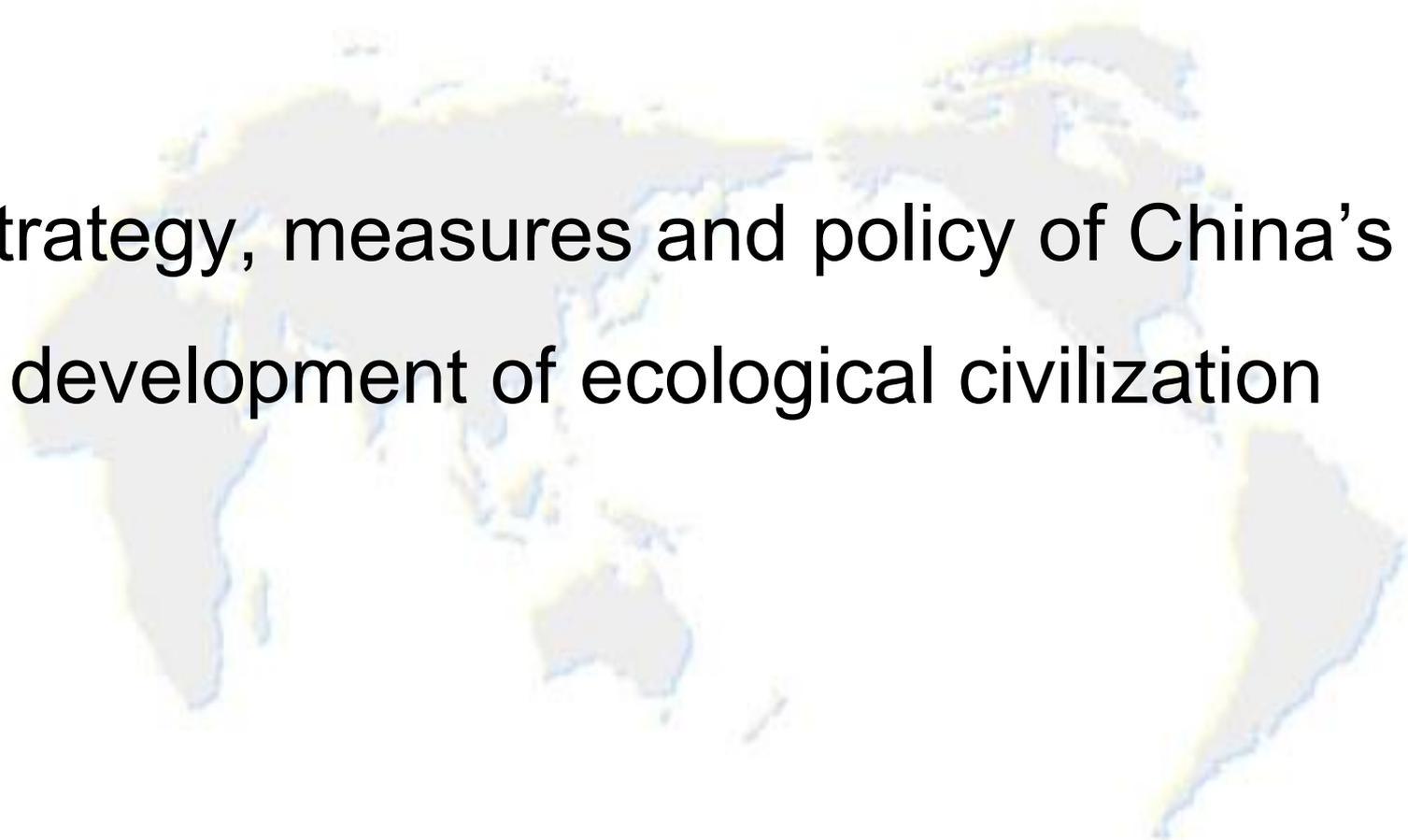
Task

- Optimizing spatial pattern of land development and fully promoting resource conservation
- Giving more protection to natural ecosystem and strengthening the development of ecological civilization system



2. Development of ecological civilization and sustainable development

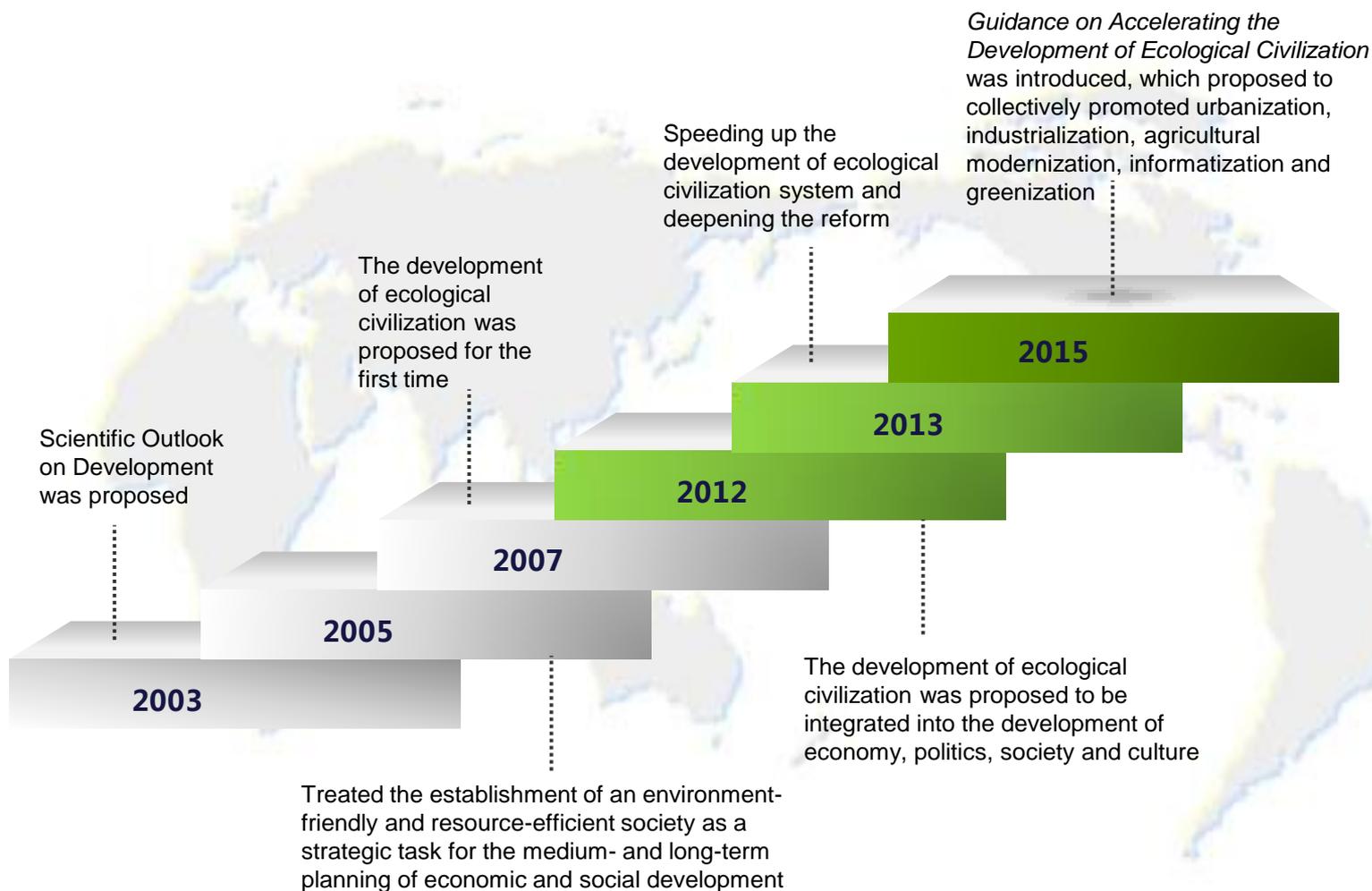


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Strategy, measures and policy of China's development of ecological civilization



1. Strategy Evolution and strategic planning





The green index and targets of the “12th 5-Year Plan”

Index		2010	2015	Comparison (%)
1	Cultivated Land Quantity (100 million Mu)	18.18	18.18	/
2	Decrease of unit water consumption of industrial added value (%)	/	/	-30
3	Effective coefficient of irrigative water utilization	0.5	0.53	
4	The proportion of consumption of non-fossil energy in primary energy	8.3	11.4	+3.1
5	Decrease of energy consumption per unit of GDP (%)	/	/	-16
6	Decrease of carbon dioxide emission per unit of GDP (%)	/	/	-17
7	Discharge of COD (10,000 Ton)	2551.7	2347.6	-8.0
8	Discharge of Ammonia Nitrogen (10,000 Ton)	264.4	238.0	-10.0
9	Discharge of SO ₂ (10,000 Ton)	2267.8	2086.4	-8.0
10	Discharge of NO _x (10,000 Ton)	2273.6	2046.2	-10.0
11	Proportion of water quality worse than Grade V in surface water monitored section (%)	17.7	<15.0	-2.7
12	Proportion of water quality which reaches the standard in seven main water system monitored sections (%)	55.0	>60	+5.0
13	Proportion of urban air quality which reaches the standard (%)	72.0	≥80	+8.0



2. Planning and action targets

	Time	Strategic targets
Energy development	2020	<ul style="list-style-type: none"> ● Total consumption of primary energy should be controlled within 4.8 billion tons of standard coal equivalent (SCE) ● Total consumption of coal should be controlled within 4.2 billion tons ● Total production of primary energy in China should reach 4.2 billion tons of SCE ● The proportion of consumption of non-fossil energy in primary energy should be 15% ● The proportion of natural gas should be more than 10% ● The proportion of consumption of coal should be less than 62%
Air pollution prevention and control	2017	<ul style="list-style-type: none"> ● As for cities on and above the regional level in China, the concentration of PM10 should decrease more than 10 % when compared with that of 2012. Days of good air quality should increase annually ● In Beijing-Tianjin-Hebei Metropolitan Region, Yangtze River Delta and Pearl River Delta, the concentration of PM2.5 should drop about 25%, 20% and 15% respectively ● Annual average concentration of PM2.5 in Beijing should be controlled with 60 microgram/cubic meter
Water pollution prevention and control	2020	<ul style="list-style-type: none"> ● Water quality in China should be improved gradually ● Heavily polluted water bodies should decrease substantially ● The safety level of drinking water should keep improving ● Overexploitation of underground water should be strictly controlled and the trend of underground water pollution should be changed ● Offshore environmental quality should be stable and good ● Water eco-environment in Beijing-Tianjin-Hebei Metropolitan Region, Yangtze River Delta and Pearl River Delta should be improved
	2030	<ul style="list-style-type: none"> ● Overall water environmental quality in China should be improved and the function of water ecosystem should be recovered primarily
	Middle of this century	<ul style="list-style-type: none"> ● Ecological environment quality should be improved comprehensively and the ecosystem should realize virtuous circle

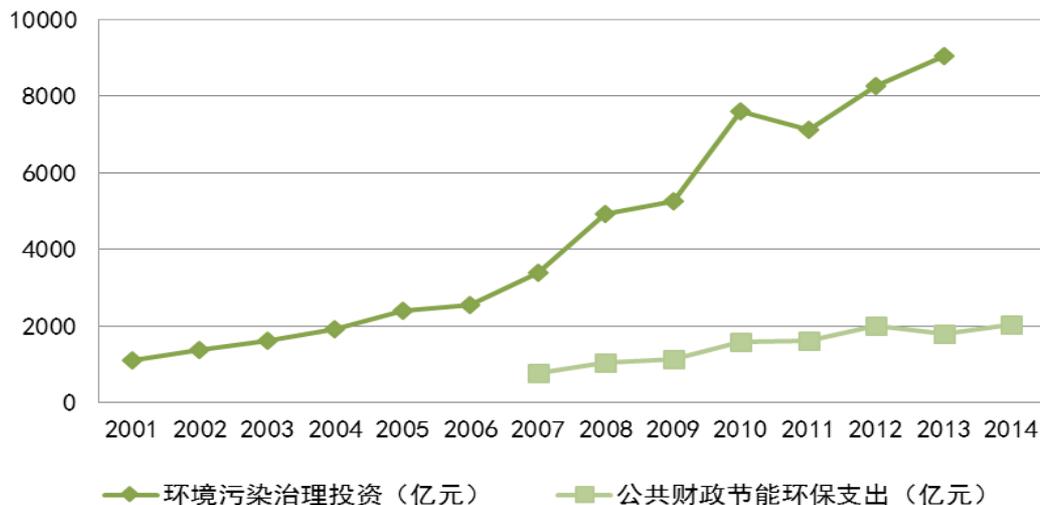


3. Policy instruments and tools

- Administrative order – eliminate outdated industrial capacity
- Strengthening environmental access and enhancing main pollutant discharge control
- Adjusting industrial structure from the root and decreasing pollutant discharge
- Public financial means – increasing green investment, promoting environmental governance and developing environmental protection industry

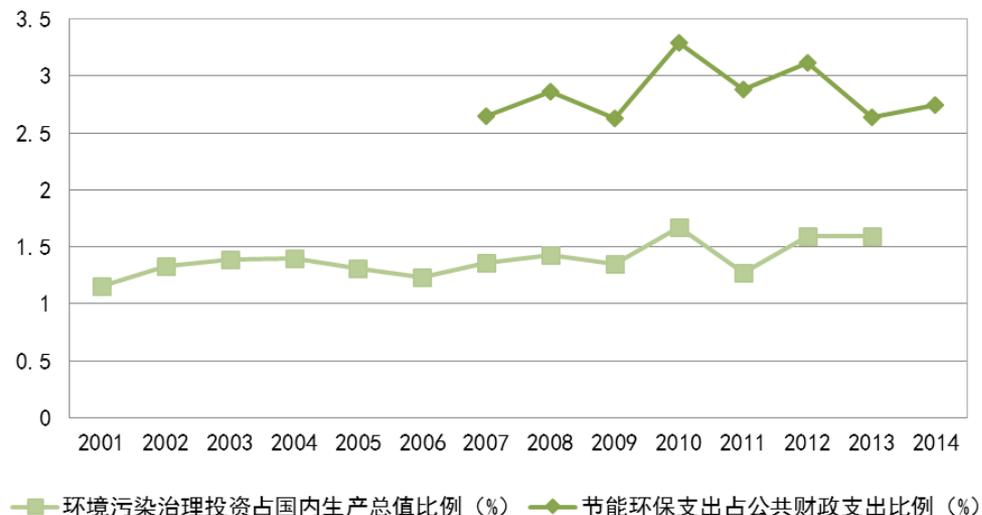


Increasing investment in environmental pollution control



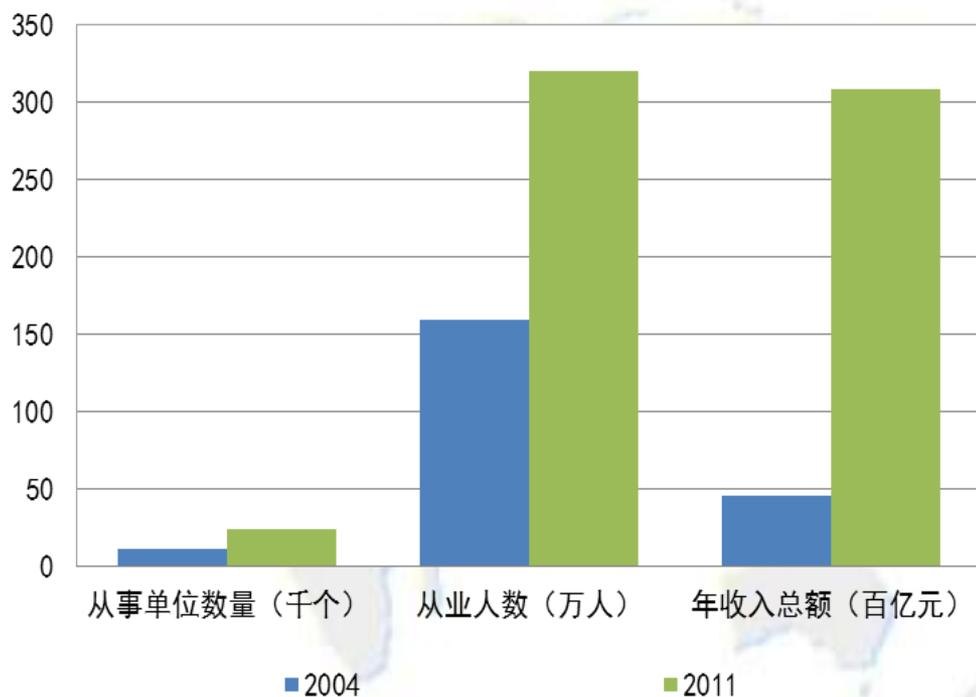
In 2008-2012, China invested a total of **1.14 trillion RMB** in energy and environmental conservation, with an annual increasing being **24.1%**.

In 2007, there were desulfurization price subsidies for Chinese thermal power enterprises. In 2012, there emerged denitration price subsidies, with the annual subsidies being **10 billion RMB**.





Promoting the development of environmental protection industry



Revenue of environmental protection industry increased from 457.21 billion RMB in 2004 to 3 trillion RMB in 2011.



3. Policy instruments and tools

- Plans for the development of ecological civilization system was proposed in the Third Plenum of the 18th CPC Central Committee:
 - Improving the property system of natural resource assets and the saving and intensive using system of energy, water and land
 - Improving the national management and supervision system of natural resources and unifying the regulation duties of the people who act as the owners of public natural resources and national land
 - Delimiting the red line for ecological protection
 - Exploring ways to compile a natural resource balance sheet and implementing natural resource audits when leading officials leave their positions. Establishing a lifelong accountability system for ecological and environmental damage
 - Implementing sound compensation systems for use of resources and for damage to the ecological environment
 - Reforming the ecological protection management system



4. Local practice

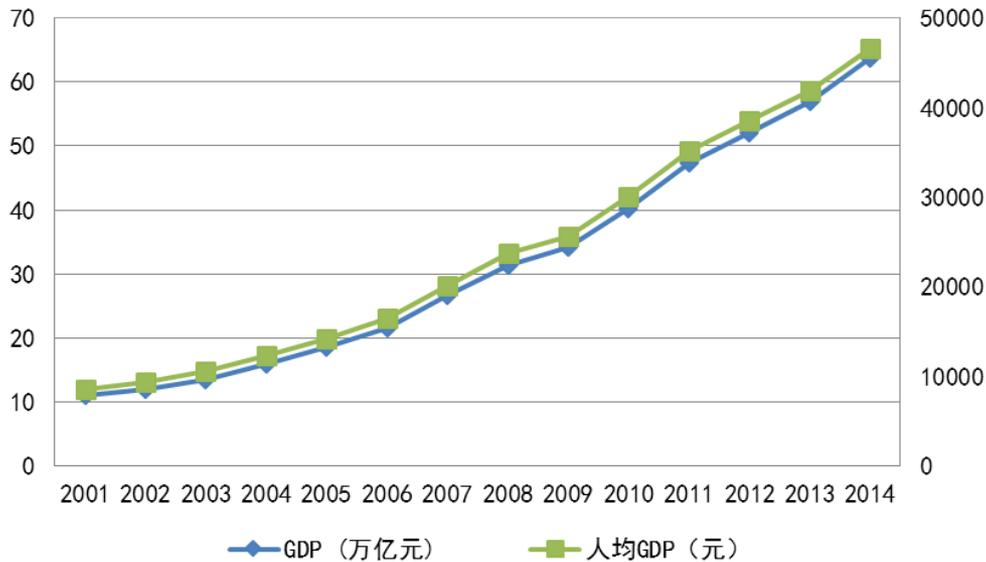
- With the guidance of the Ministry of Environmental Protection, up to 2014, there were 16 provinces and over 1000 counties (cities and districts) establishing demonstration areas for the development of ecological civilization, among which 55 counties (cities and districts) met the initial stage requirements of the demonstration areas building.
- In 2012, pilot projects for carbon emissions trading were launched in Beijing, Tianjin, Shanghai, Chongqing, Shenzhen and Hubei Province.
- In 2014, the total amount of outdated capacity of steelmaking, cement and plate glass eliminated in China were 31.1 million tons, 81 million tons and 37.6 million weight boxes respectively.



Achievements of China's development of ecological civilization



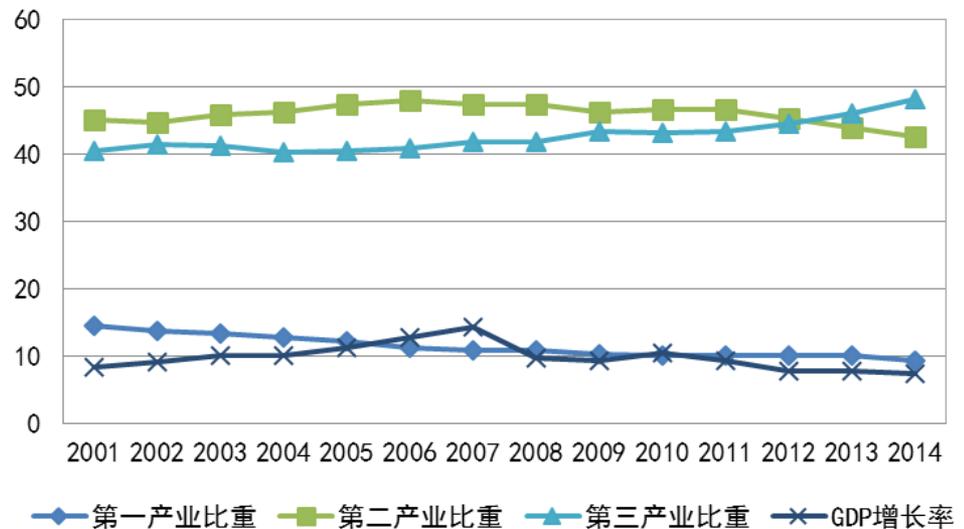
1. Economic growth



The total GDP in China surpassed 5.58 trillion Dollars in 2010, making it become the world's second largest economy;

In 2014, it was over 10 trillion Dollars, so China, after the United States, became the second country entering the "world's total GDP of over \$ 10 trillion club".

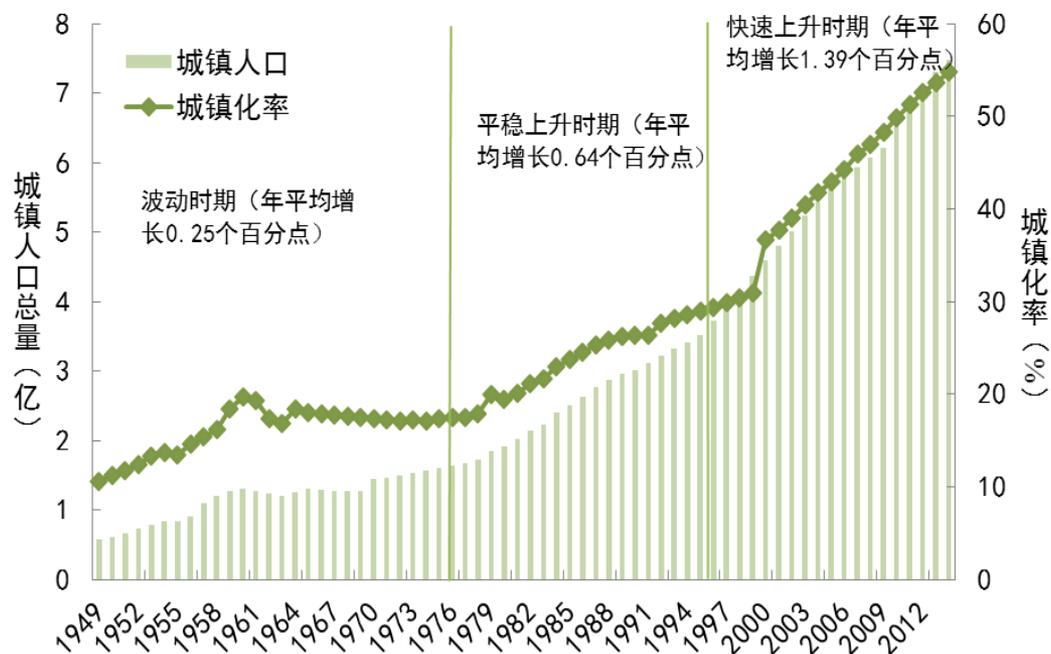
In 2010-2014, per capita GDP in China grew from 4300 Dollars to 7500 Dollars. China thus became middle-income countries.





2. Social development and urbanization

- In 2014, population of mainland China was about **1.37 billion**, with the average life span being **75.3**.
- Accumulated amount of urban employed people increased from around 350 million in 2010 to 400 million in 2014. The registered unemployment rate was stable at around **4%**.
- Urban-rural income ratio decreased from 3.23 : 1 in 2010 to **2.75 : 1** in 2014.
- In 2014, poor people in rural areas were 70.17 million, **12.32 million** less than that in 2013.
- The coverage rate of universal health insurance was over **95%**. New rural social endowment insurance and endowment insurance for urban residents achieved full coverage.
- The urbanization rates exceeded the world level.





3. Environmental protection

- In 2014, the first 74 cities which implemented the new ambient air quality standard in accordance with *Air Pollution Prevention and Control Action Plan* witnessed a year-on-year **decrease of 11.1%** in PM2.5 concentration. In the first quarter of this year, the average PM2.5 concentration of these 74 cities was 72 microgram/cubic meter, decreasing **16.3%** on a year-on-year basis.
- In April, the State Council approved and implemented the *Water Pollution Prevention and Control Action Plan*. It contained **238** measures, aiming at improving the overall water quality in China with 15 years.
- *Soil Pollution Prevention and Control Action Plan* is about to be completed. The “13th 5-Year Plan” for environmental protection is under preparation.



3. Environmental protection

Promoting ecological protection and improving rural environment so as to enhance the service function of ecosystem

- Fully implementing *China Biodiversity Conservation Strategy and Action Plan*, printing and distributing *China Action Plan for UN Decade Biodiversity (2014-2015)*
- Implementing key projects for biodiversity conservation. There are 2729 nature reserves.
- Deepening the improvement of rural environment. In 2008-2014, the central government invested a total number of 25.5 billion RMB for 59,000 villages, directly benefitting 110 million people.

Fully carrying out the development of environment legal system and strictly implementing the newly revised *Environmental Protection Law*

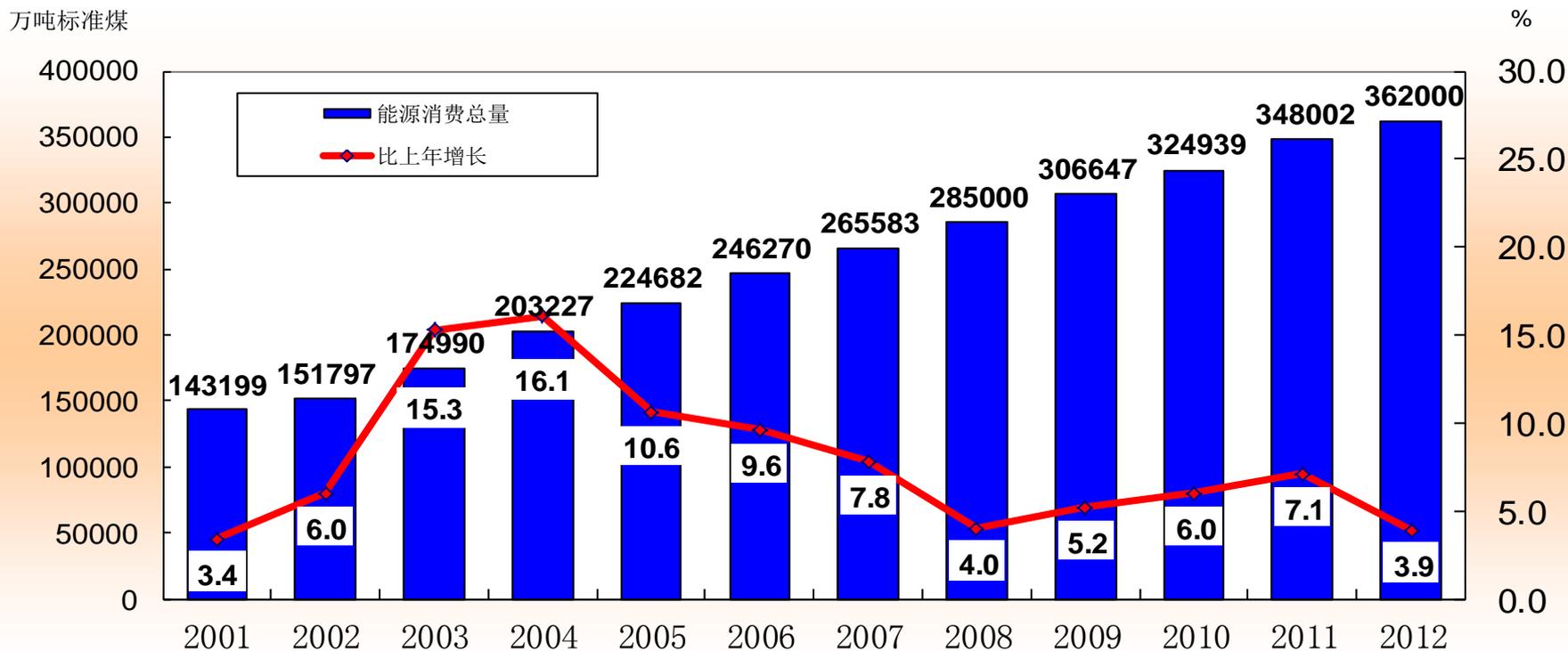
- New *Environmental Protection Law* was implemented on 1st January of this year – “The most stringent in Chinese history”
- In 2015, when the new *Environmental Protection Law* is in implementation, observing the Law becomes a New Normal
- In 2014, 4538 environmental criminal cases were uncovered and 8458 suspects were arrested. 2080 suspected criminal cases were transferred, with the number being the double of the accumulative amount in the past one decade.

Intensifying information disclosure and encouraging public participation to environmental protection

- Timely disclosing the information on environmental quality monitoring and pollutant emissions of enterprises.
- Opening channels for environmental protection complaints so as to protect people’s right to know, to participate and to supervise.
- Promoting green consumption and encouraging a healthy, diligent and green lifestyle.



In 2012, the total energy consumption in China was 3.62 billion tons of SCE, increasing 3.9% than that in 2001. For coal, the consumption growth rate is 2.5%; for crude, it is 6.0%; for natural gas, it is 10.2%; for electric power, it is 5.5%.



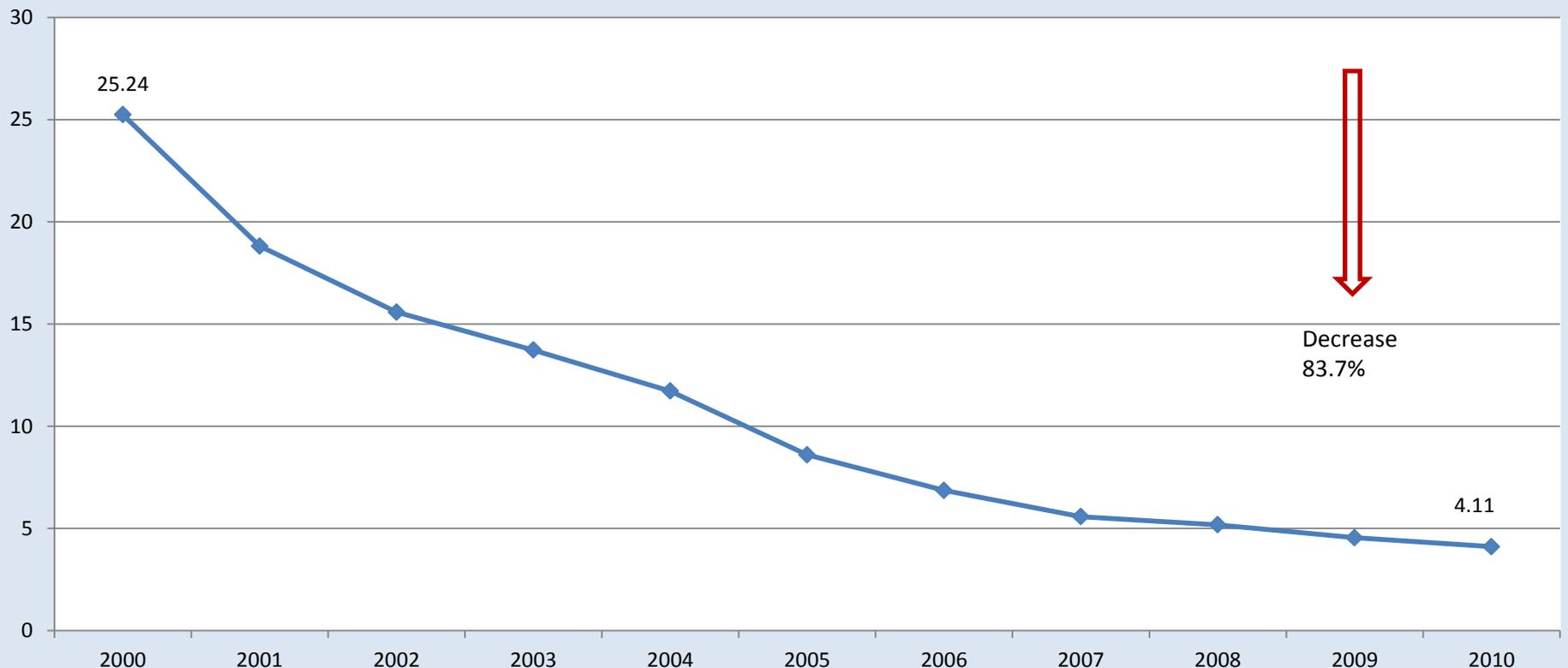
The total energy consumption and its growth rate in 2001-2012



Changes of water consumption per ton of steel

Fresh water consumption per ton of steel in previous years

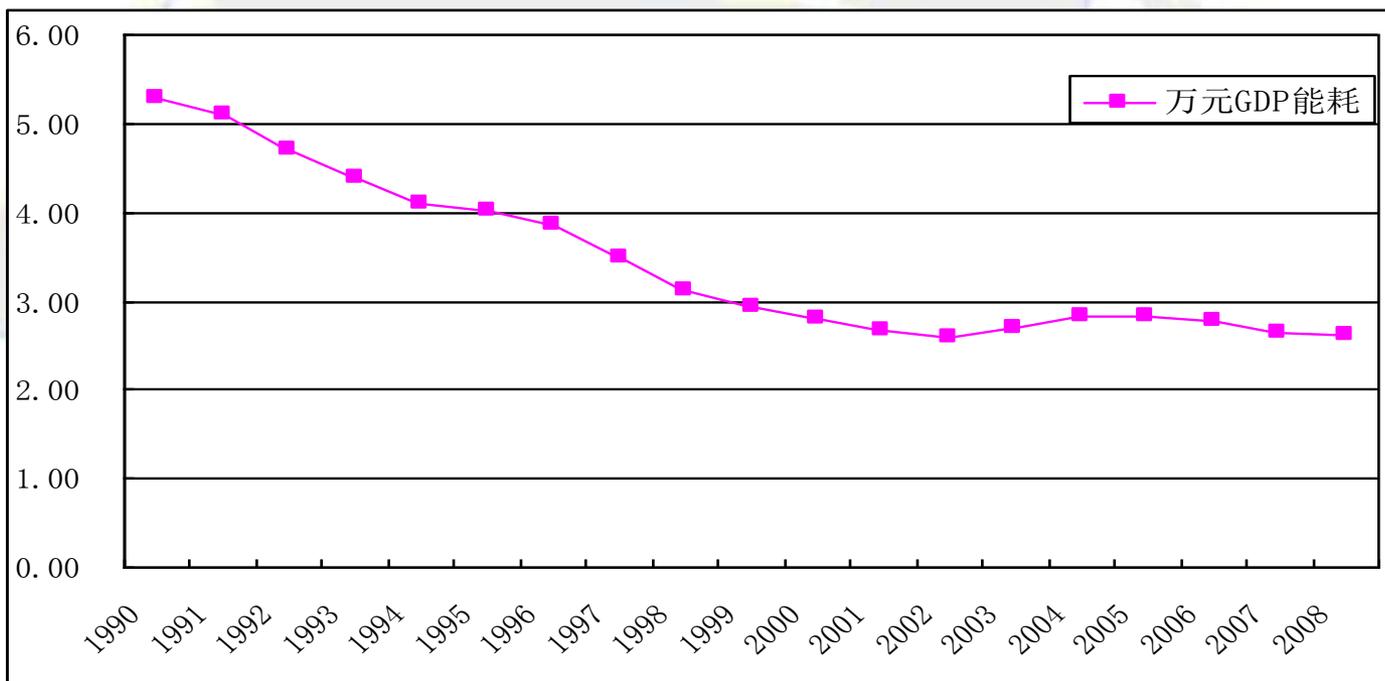
Unit: cubic meter



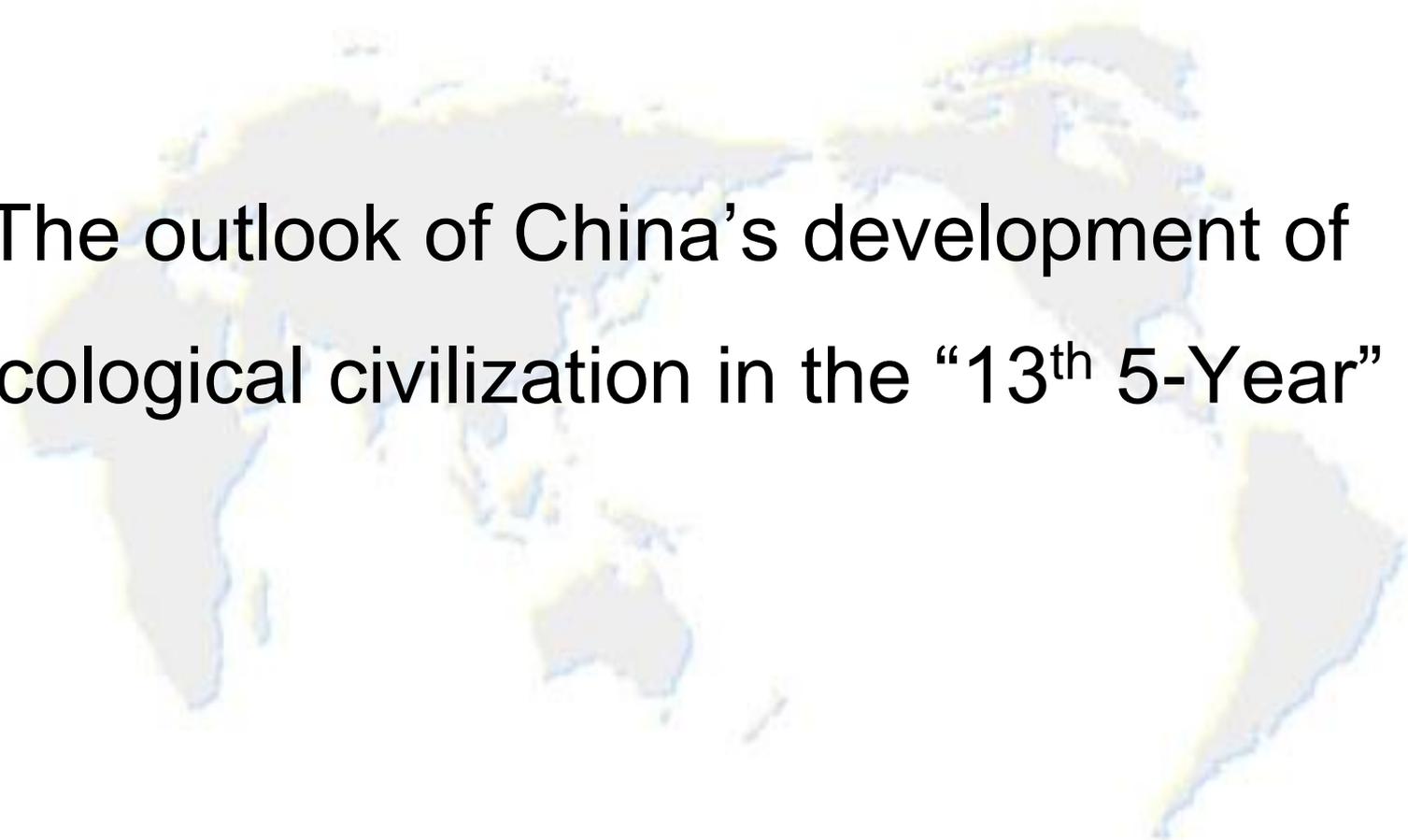


Promoting clean production

- With stringent environmental access, Environmental Impact Assessment (EIA) effectively improves the clean production level of enterprises, which directly or indirectly increases the clean production level of the whole industry and the whole society.



Energy consumption per 10,000 RMB of GDP in 1990-2008 (Ton of SCE / 10,000 RMB)



The outlook of China's development of ecological civilization in the "13th 5-Year"



1. Next five-year period is an important window of opportunity for China's transformation

- 2020 is a significant history node for China's social and economic medium- and long-term development targets
- China shoulders great history tasks in the next five years:
 - Maintaining sustainable economic growth
 - Building moderately prosperous society
 - Solving deep-rooted social conflicts
 - Improving ecological environment quality



2.The Chinese government recently issued new policy measures for the development of ecological civilization

- *Environmental Protection Inspector Program (Trial)*
- *Building Programs for Ecological environment Monitoring Network*
- *Pilot Programs for Carrying Out Audit on the Departure of Natural Resource Assets of Leaders*
- *Accountability Measures of Party and Government Leaders for Environmental Damages (Trial)*



3. The Chinese government is preparing the economic and social development plan for the "13th 5-Year"

- The development of ecological civilization will be the key content of the "13th 5-Year" Plan
- Chinese governments at all levels will continue to integrate the "Green+" concept of the development of ecological civilization into economic, political, cultural and social development
- Chinese government is more confident that the "greenization target" in the development of ecological civilization will be the long-term driving force for China's economic and social transformation



4. Promoting international exchanges and cooperation for the development of ecological civilization

China

World



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