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Inclusive Green Growth and Distributional Impacts under China's Green Growth in the 13th Five Years Plan

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How to Understand the Inclusive Green Growth

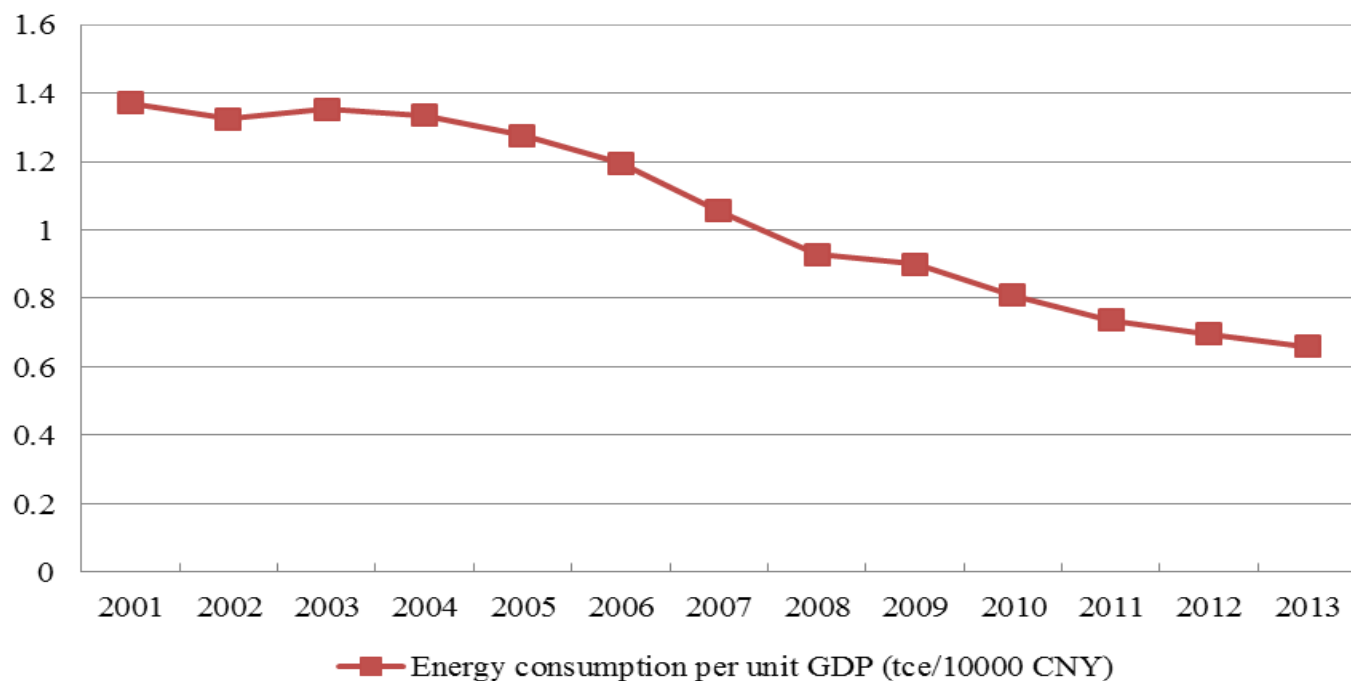
- Growth: Keep certain GDP growth rate
- Green: Environment at least has no degradation
- Inclusiveness: Balanced development btw regions, urban and rural areas, poverty reduction

The Progress of China's Inclusive Green Growth

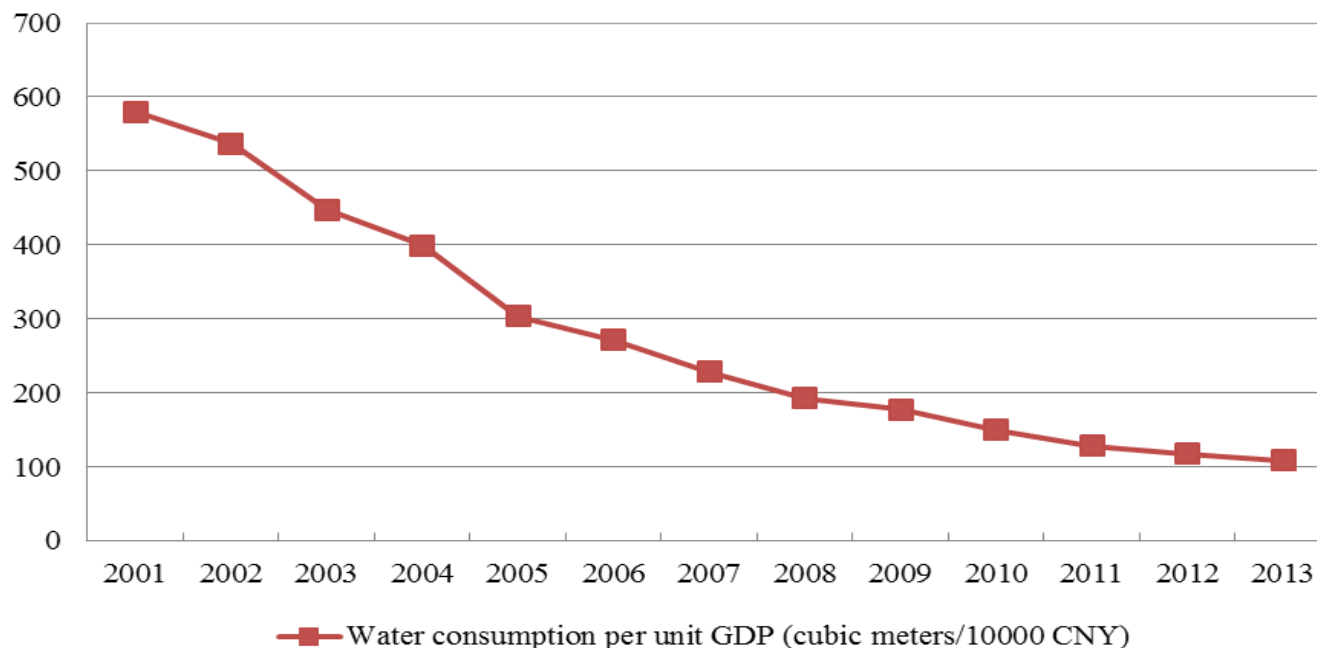
- Standard: Relative and Absolute GG
- Relative GG: Process-oriented, intensity indicators
- Absolute GG: Result-oriented, cap amount indicators

- China has made positive progress toward relative green growth.

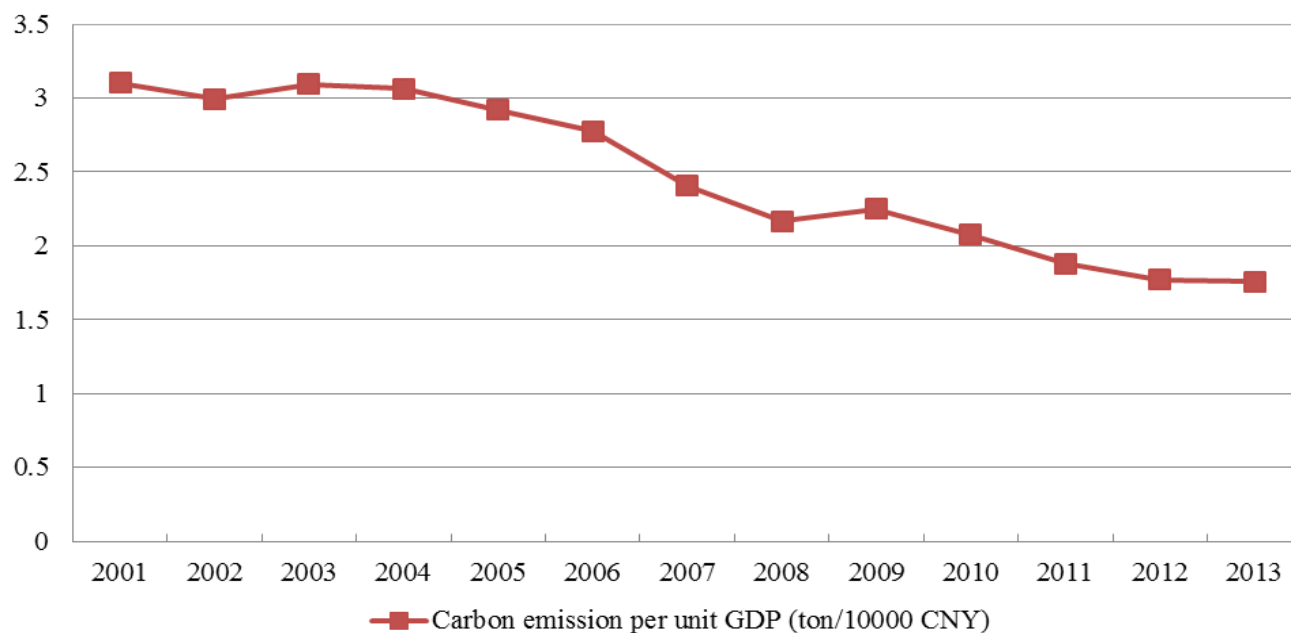
Trends in China's Energy Consumption Intensity



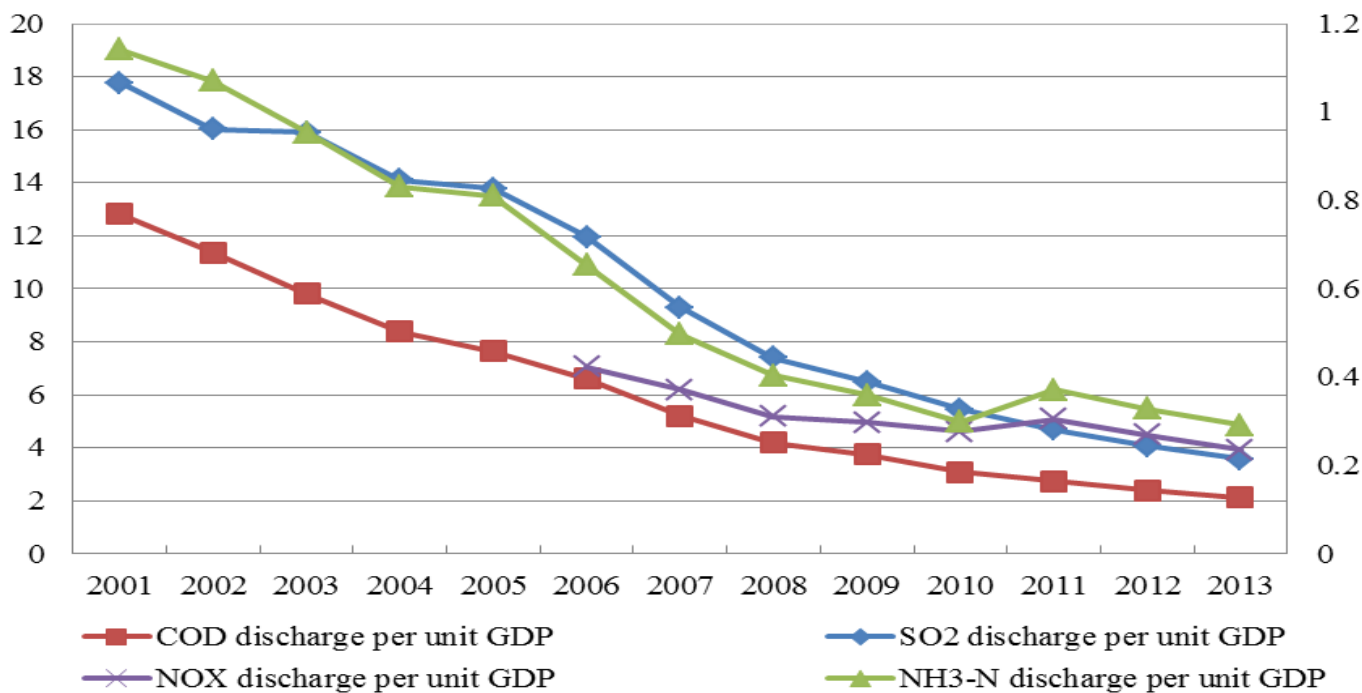
Trends in China's Water Consumption Intensity



Trends in China's Carbon Emission Intensity



Trends in China's Emission Intensity of Major Pollutants (kg/10,000 CNY)





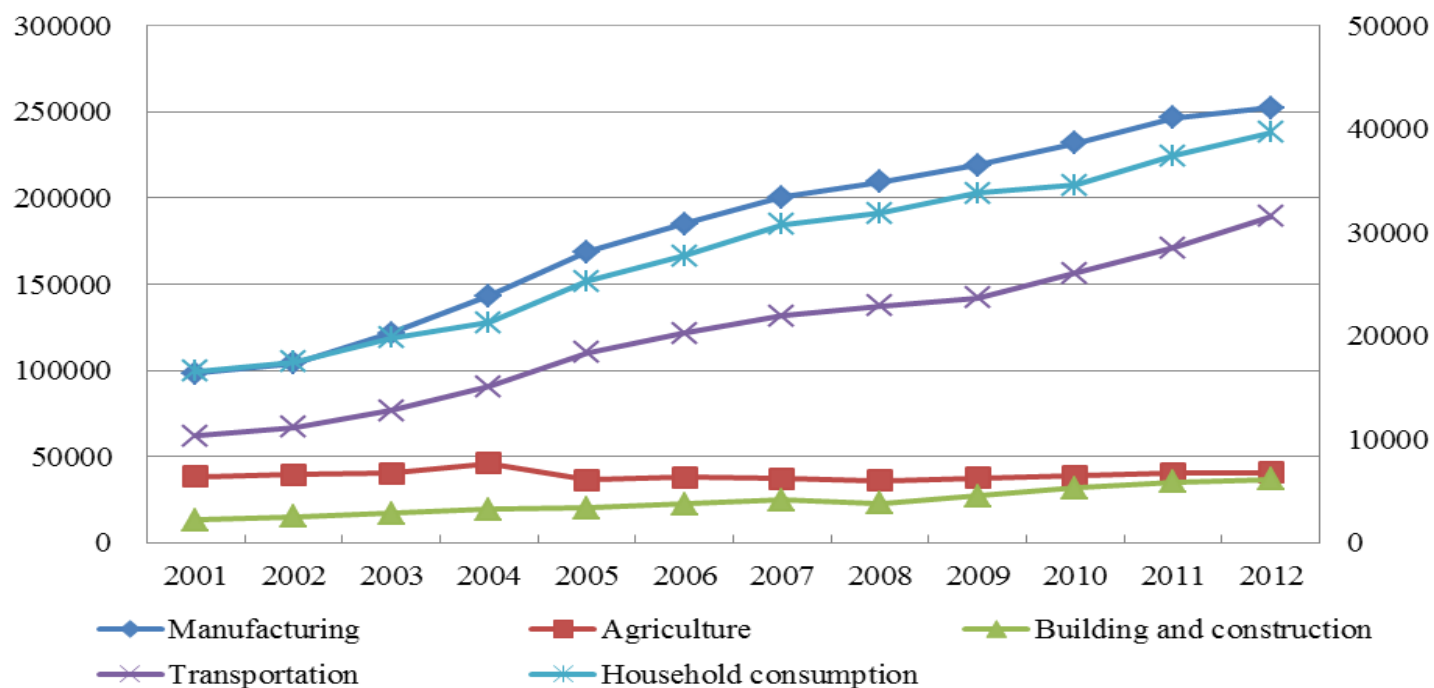
The Progress of China's Absolute Green Growth is slow (I)

- Economic growth and environmental resources do not show an absolute trend of decoupling
- China's total energy consumption, water consumption, and CO₂ emissions are still rising and far from peaking.
- Among China's major pollutants, only SO₂ and COD (primarily industrial-source COD) have been brought under a degree of control, while emissions of NO_x and NH₃-N remain high.

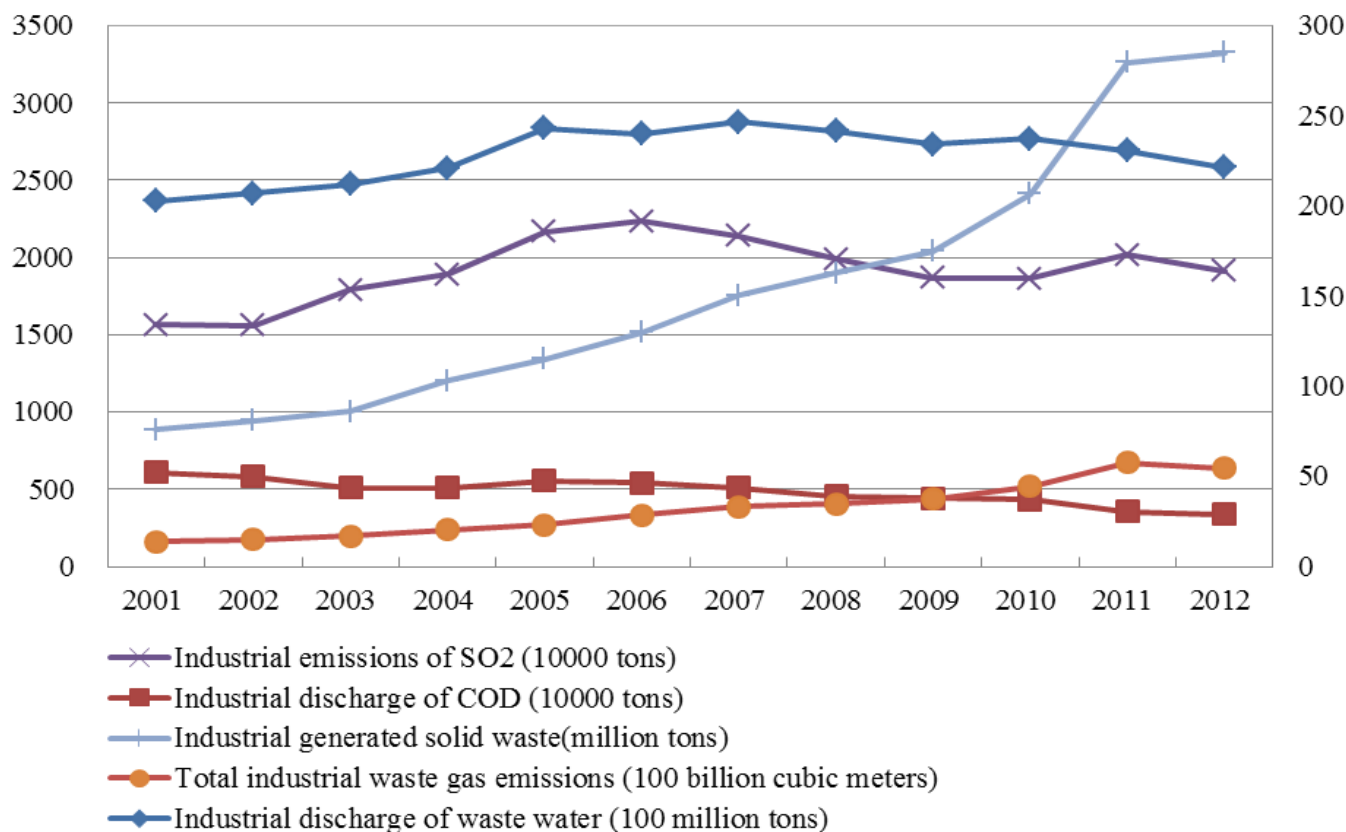
The Progress of China's Absolute Green Growth is slow (II)

- With worsening groundwater and air pollution, environmental quality has not improved significantly.
- Further, inclusive growth is far from being achieved given the uneven level of regional development.
- On the whole, absolute green growth remains slow

Trends in Total Energy Consumption in Different Sectors in China (10,000 tce)



Trends in Discharge Amounts of Major Pollutants in China's Industrial Sectors



Regional Features of China's Green Growth

- Eastern of Coastal Area: the advantage of GG is comparatively apparent
- Western Area: Ecology and Environment is fragile
- North-East and Middle Area: the level of GG is low on the whole

China has Ambitious Goals of GG in the 13th Five Years Plan (2016-2020): Economic Dimension

Indicators		2015	2020	Annual Average Growth (cumulative)	Types
➤ Economic development					
(1) GDP (Trillion USD)		10.46	>14.32	>6.5%	Predictive
(2) Overall labor productivity (10,000 USD/ Person)		1.34	>1.85	>6.6%	Predictive
(3) Urbanization	Resident urban population in total population (%)	56.1	60	[3.9]	Predictive
	Registered urban population in total population (%)	39.9	45	[5.1]	
(4) Value added of service industry (% of GDP)		50.5	56	[5.5]	Predictive
	Mobile broadband penetration (% of internet users)	57	85	[28]	

Note: ① The growth of GDP and overall labor productivity is in real prices whereas their absolute values are in constant prices of 2015. ② [] denotes a cumulative number over five years. ③ The acceptable annual average level of PM_{2.5} is 35 ug/m³ and below

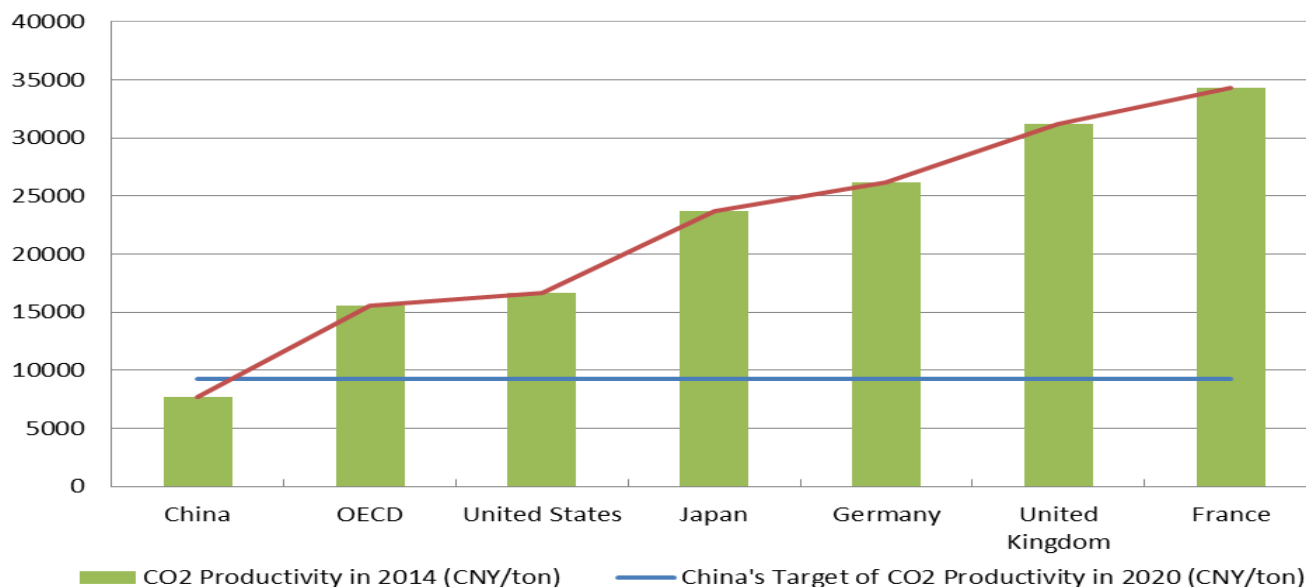
China has Ambitious Goals of GG in the 13th Five Years Plan (2016-2020): Social Dimension

Indicators	2015	2020	Annual Average Growth (cumulative)	Types
➤ People's well-being				
(9) Growth of per capita disposable income (%)	—	—	>6.5	Predictive
(10) Average schooling of working-age population (year)	10.23	10.8	[0.57]	Binding
(11) Increase in urban employment (10,000 people)	—	—	[>5000]	Predictive
(12) Rural population lifted out of poverty (10,000 people)	—	—	[5575]	Binding
(13) Basic pension coverage (%)	82	90	[8]	Predictive
(14) Renovation of urban slums (10,000 units)	—	—	[2000]	Binding
(15) Per capita life expectancy (years of age)	—	—	[1]	Predictive
Note: ① The growth of GDP and overall labor productivity is in real prices whereas their absolute values are in constant prices of 2015. ② [] denotes a cumulative number over five years. ③ The acceptable annual average level of PM _{2.5} is 35 ug/m ³ and below				

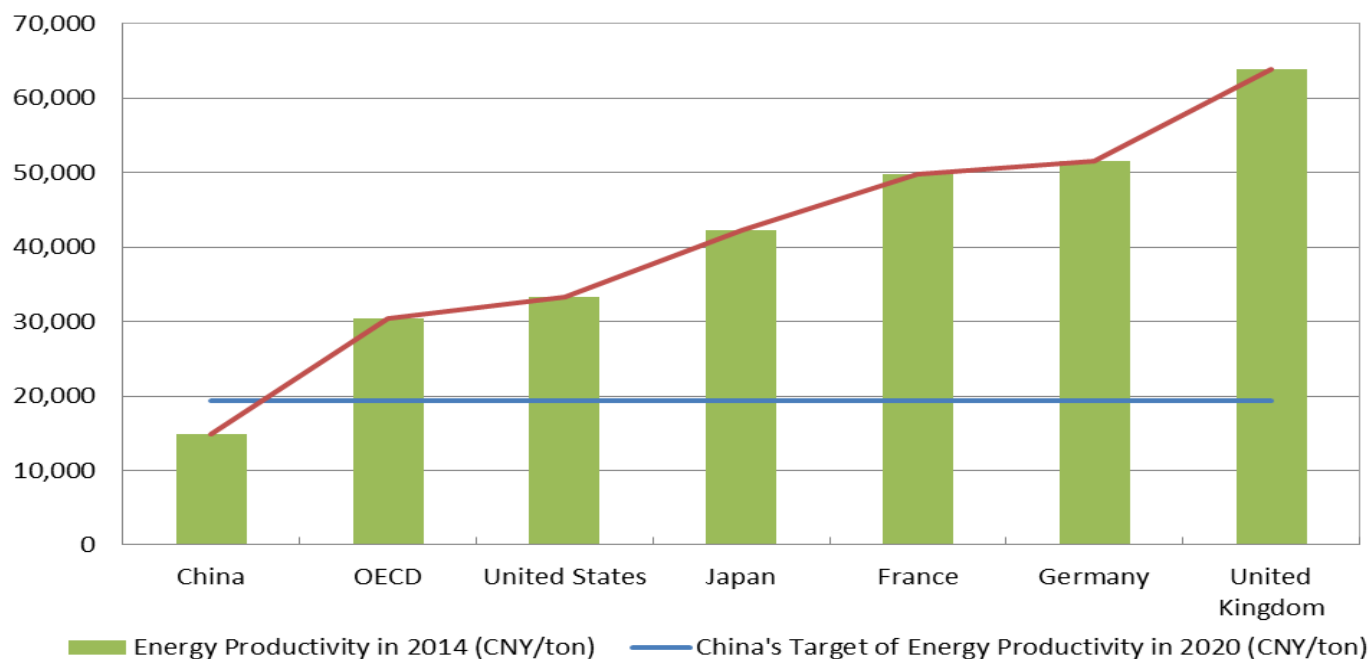
China has Ambitious Goals of GG in the 13th Five Years Plan (2016-2020): Environmental Dimension

Indicators	2015	2020	Annual Average Growth (cumulative)	Types	
> Resources and environment					
(16) Minimum amount of cultivated land (square kilometers)	1,243,333	1,243,333	[0]	Binding	
(17) Maximum amount of additional land for development (square kilometers)	—	—	[<21,707]	Binding	
(18) Reduction of water consumption per unit of GDP (%)	—	—	[23]	Binding	
(19) Reduction of energy consumption per unit of GDP (%)	—	—	[15]	Binding	
(20) Non-fossil energy in primary energy consumption rate (%)	12	15	[3]	Binding	
(21) Reduction of CO ₂ per unit of GDP (%)	—	—	[18]	Binding	
(22) Forest development	Forest coverage (%)	21.66	23.04	[1.38]	Binding
	Forest stock (100m ³)	151	165	[14]	
(23) Air quality	Percentage of days per year with good air quality in cities at the prefectural level and above (%)	76.7	>80	—	Binding
	Reduction of PM _{2.5} concentration in cities at the prefectural level and above that currently do not meet the acceptable standards (%)	—	—	[18]	
(24) Surface water quality	Share of water bodies at Class III or above (%)	66	>70	—	Binding
	Share of water bodies at Class V (%)	9.7	<5	—	
(25) Reduction of major pollutants (%)	COD NH ₃ -N SO ₂ NO _x	—	—	[10] [10] [15] [15]	Binding
Note: ① The growth of GDP and overall labor productivity is in real prices whereas their absolute values are in constant prices of 2015. ② [] denotes a cumulative number over five years. ③ The acceptable annual average level of PM _{2.5} is 35 ug/m ³ and below					

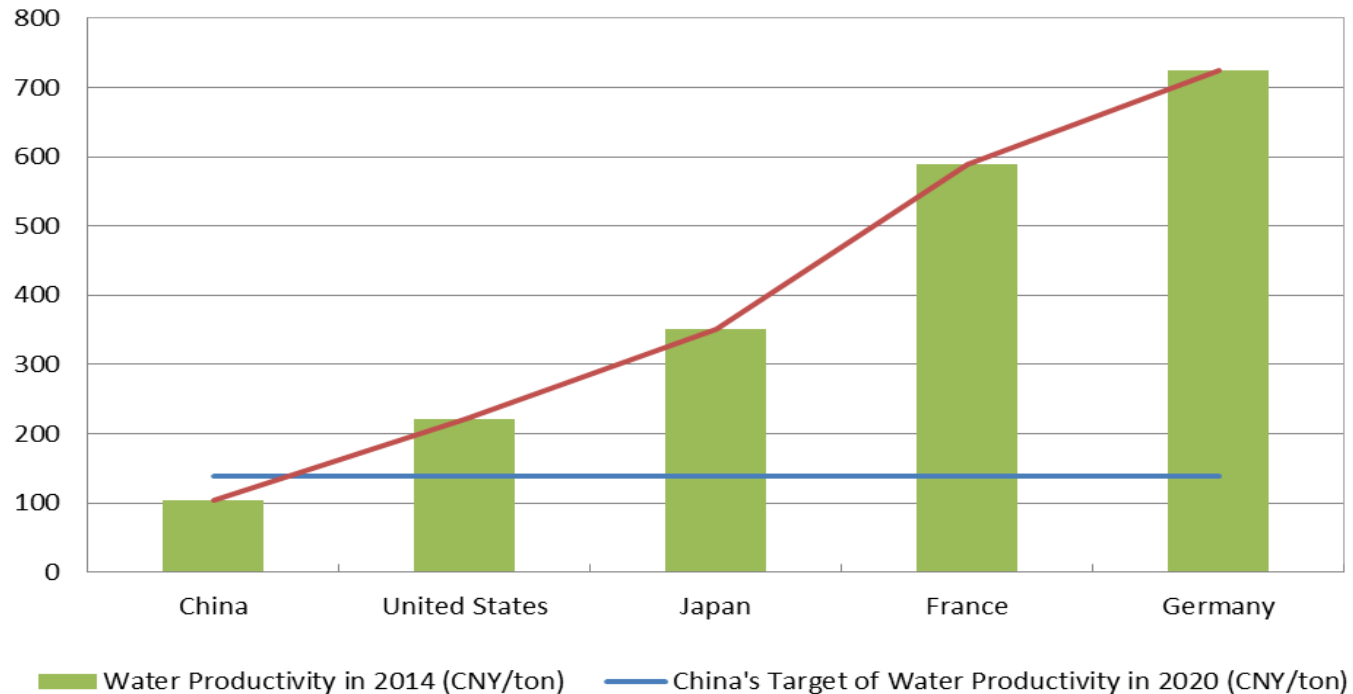
There is still Remaining big Challenges for China's IGG in the 13th Five Years Plan (2016- 2020): Comparisons of CO2 Productivity among Different Countries



Comparisons of Energy Productivity among Different Countries



Comparisons of Water Productivity among Different Countries



Concrete Challenges of China's IGG in the 13th FYP

- Unbalanced economic structure and regional development
- Inertial reliance on the inherent extensive model of economic growth
- Complex and difficult environmental issues
- Deficient institutional design for green growth
- Significant short-term costs for green growth
- The immature green consumption market
- Inadequate green technological innovation and application
- Environmental risks with the new round of urbanization
- Insufficient capacity of the environmental institutional systems to support green growth

Conclusions:

Basic Pathway of China's Green Growth

- First, Adjust the structure of Macro-economy and industries
- Second, Greening the entire economic chains and industrial chains
- Third, Drive the green growth by innovation

Enabling Mechanism of Green Growth in the 13th FYP(I)

- Guide the 13th FYP with green growth
- Improve market mechanism for green growth
- Set up a financial system for green growth
- Reform the taxation system to encourage green growth
- Set up global green value chain and trade policy framework

Enabling Mechanism of Green Growth in the 13th FYP(II)

- Strengthen the mechanism of reversal pressure of environmental regulations, standards, and supervision and law enforcement for green growth
- Strengthen the system of scientific and technological innovation for green growth
- Build human capital and information capability for green growth
- Perfect policies that support green urbanization
- Improve policies for new energy and environmental industries

Thank You

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