

Speech at Workshop on EGS on 24-25 September, 2009, Geneva

Introduction to China's Scheme of Pollution Control and Emission Reduction and Green Trade Promotion

Ministry of Environmental Protection of P. R.
China



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1. Background--Status of Environmental Protection in China

□ Domestic background—Stage of rapid developing

- Rapid Industrialization and Urbanization
- Pressure from huge growing population and structure change of population
- Low environmental capacity and serious environmental situation
- Low S&T support, low energy efficiency
- On the way to overall well-off society

□ International background—foreign trade structure

- China is more and more being integrated into the world during the process of globalization
- China is one of the linkages of product chains
- China has become a world factory

1. Background--Status of Environmental Protection in China

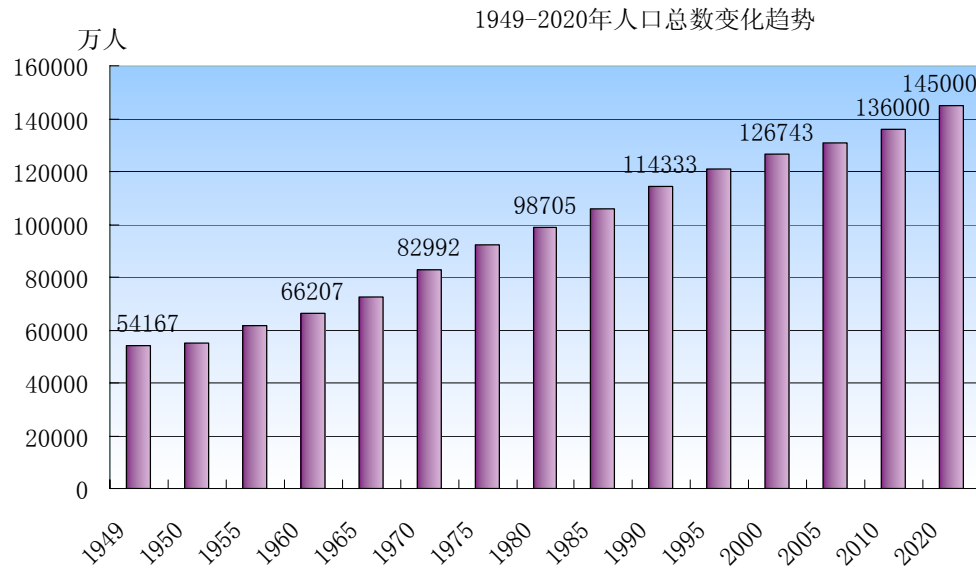


Fig.1-Population Growing status in China from 1949 to 2020

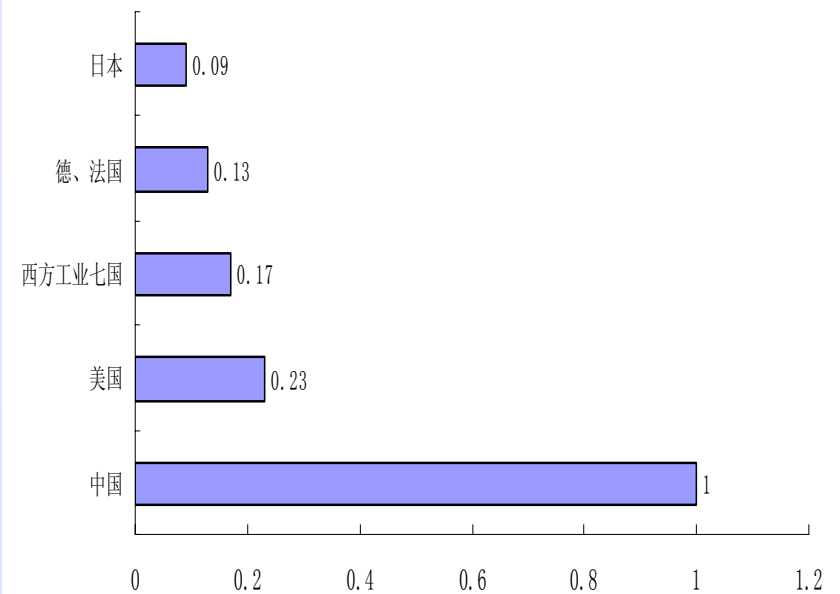


Fig.2-China Comparison with Developed countries on Energy Use Intensity

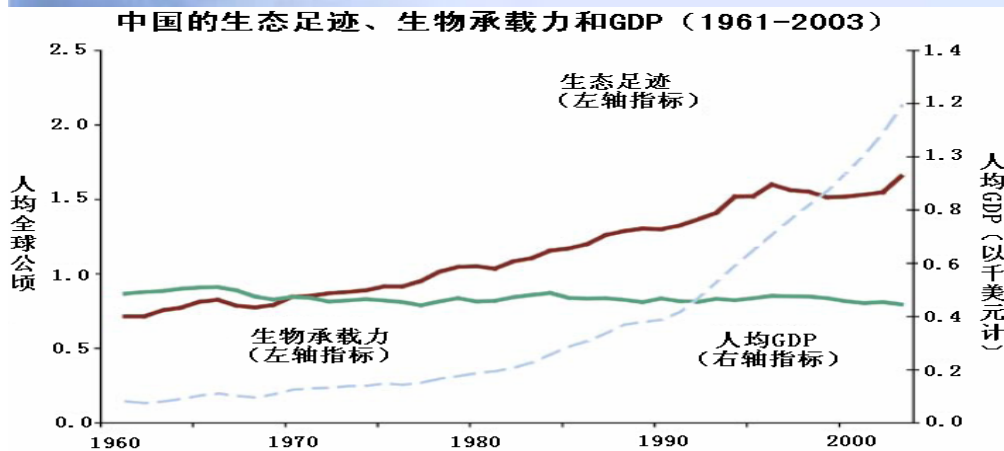


Fig.3-China Low environmental capacity

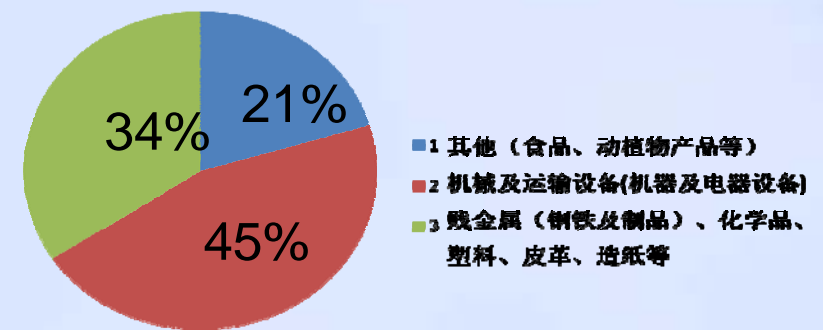


Fig.4-Foreign Trade Structure in 2006

1. Background--Demand as a Developing member: Technology Transfer Demand

As a Developing member: Common but Differentiated Responsibility

- Environmental Pressures are larger than any other countries in the world
- Resource problems are more than any other countries in the world
- To solve problems is difficult than any other countries in the world



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2. Efforts and Achievements on Pollution Control and Emission Reduction in China

Central government is paying high attentions on environmental protection

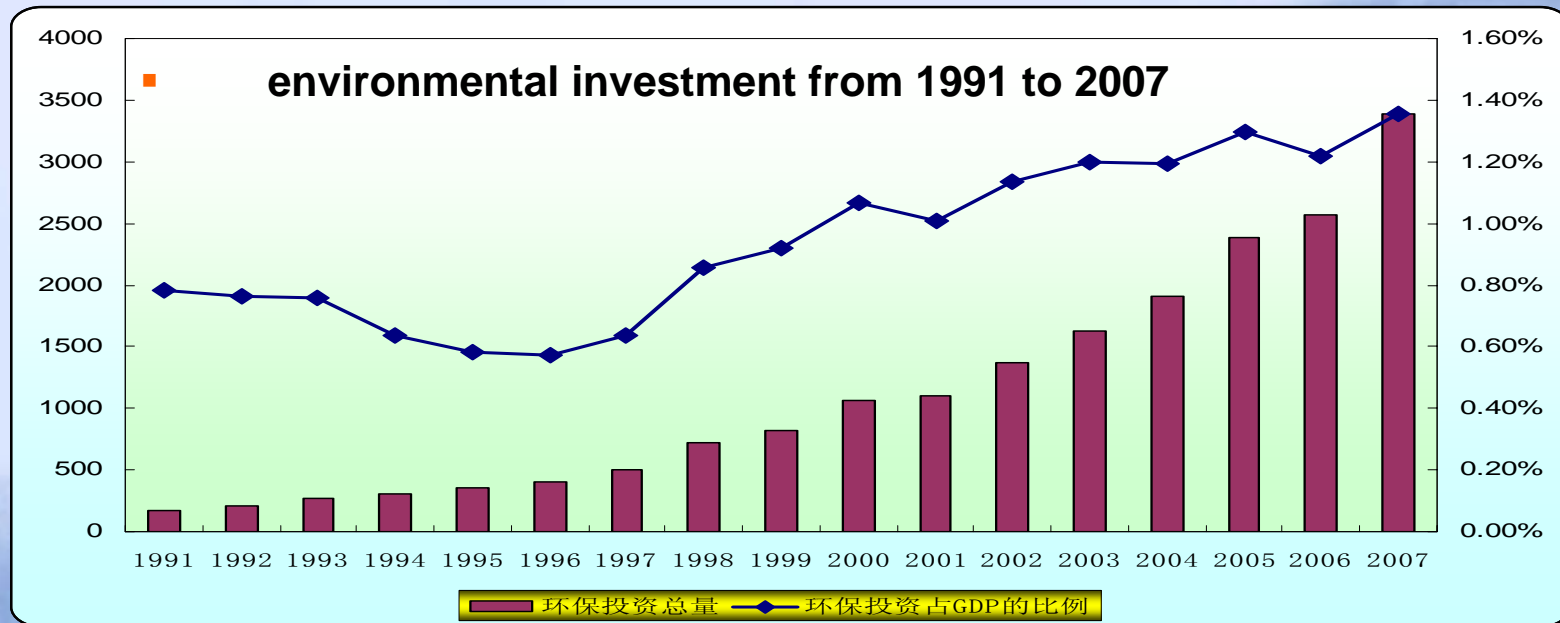
- Concept of Scientific Development
- Resource-saving and Environmental Friendly Society
- Ecological Civilization



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2. Efforts and Achievements on Pollution Control and Emission Reduction in China



- **Environmental investments growing**
 - During 2000-2005, 0.83 trillion Yuan, taking up 1.19% of total GDP
 - During 2006-2010, 1.4 trillion Yuan, taking up 1.23% of total GDP
- **Stimulus plan for financial crisis**
 - Total 4 trillion Yuan
 - 0.35 trillion Yuan for environment

2. Efforts and Achievements on Pollution Control and Emission Reduction in China

National targets —2006-2010 (the five-year national development plan

- energy intensity 20% reduction
- SO₂ emission 10% reduction
- COD discharge 10% reduction
- Sewage treatment rate no lower than 70%
- Utilization rate of industrial wastes over 60%



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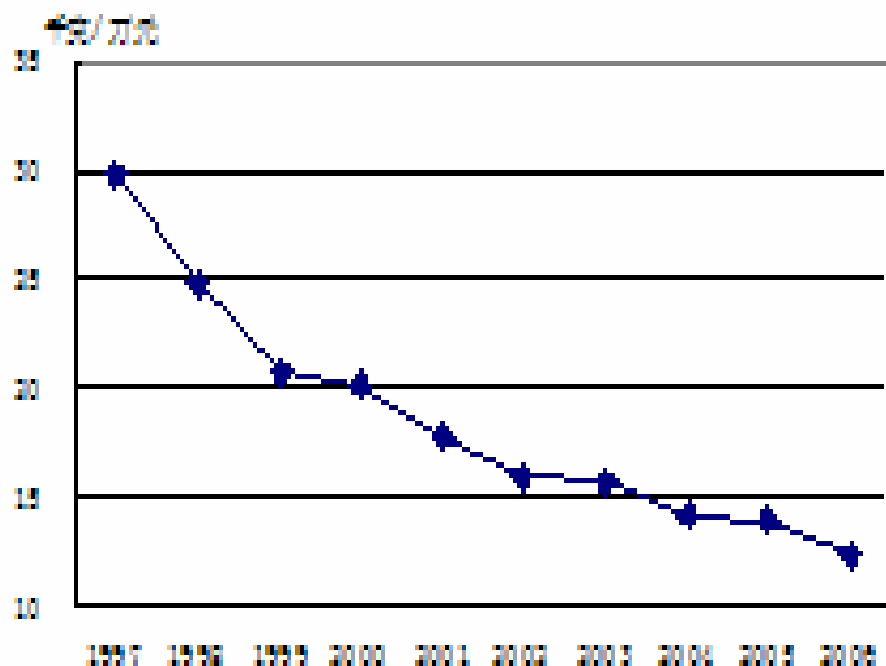
Ministry of Environmental Protection of the People's Republic of China

2.Efforts and Achievements on Pollution Control and Emission Reduction in China

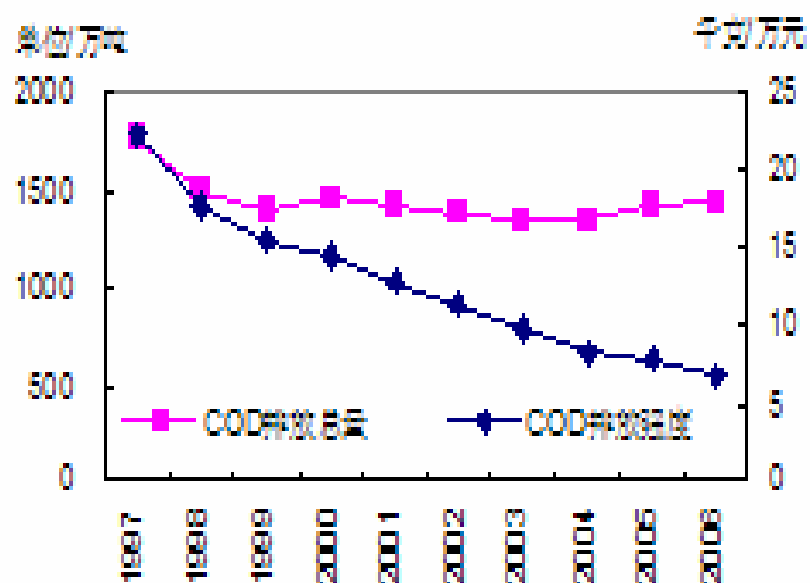
- **Command and control measures**
- **Industrial structure adjustment**
- **Economic instruments**
 - **Green Trade policy**
 - Eco-label promotion
 - Prohibited goods list regulated by MEAs and national laws
 - 5-25% exporting tariff on high energy intensive and pollution intensive products started from January 1, 2007
 - Newly issued overseas investment guideline jointly by MEP and MOFCOM

2. Efforts and Achievements on Pollution Control and Emission Reduction in China

Declining of key pollutant emission intensity

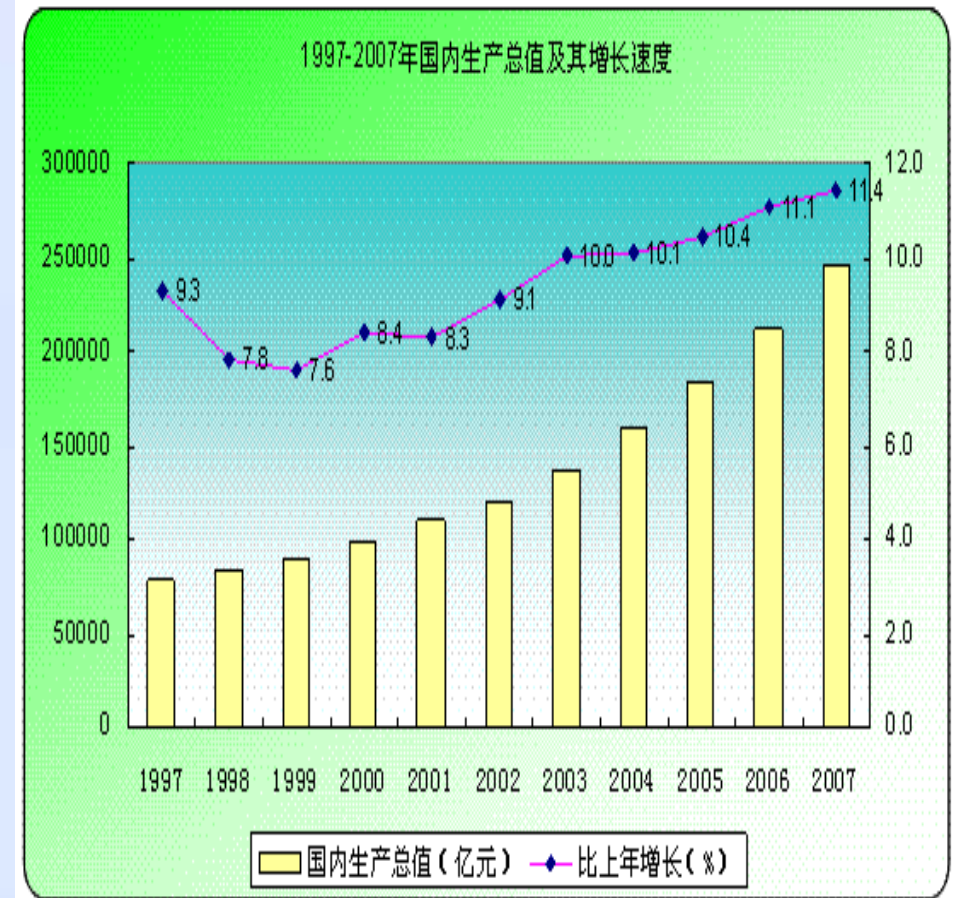
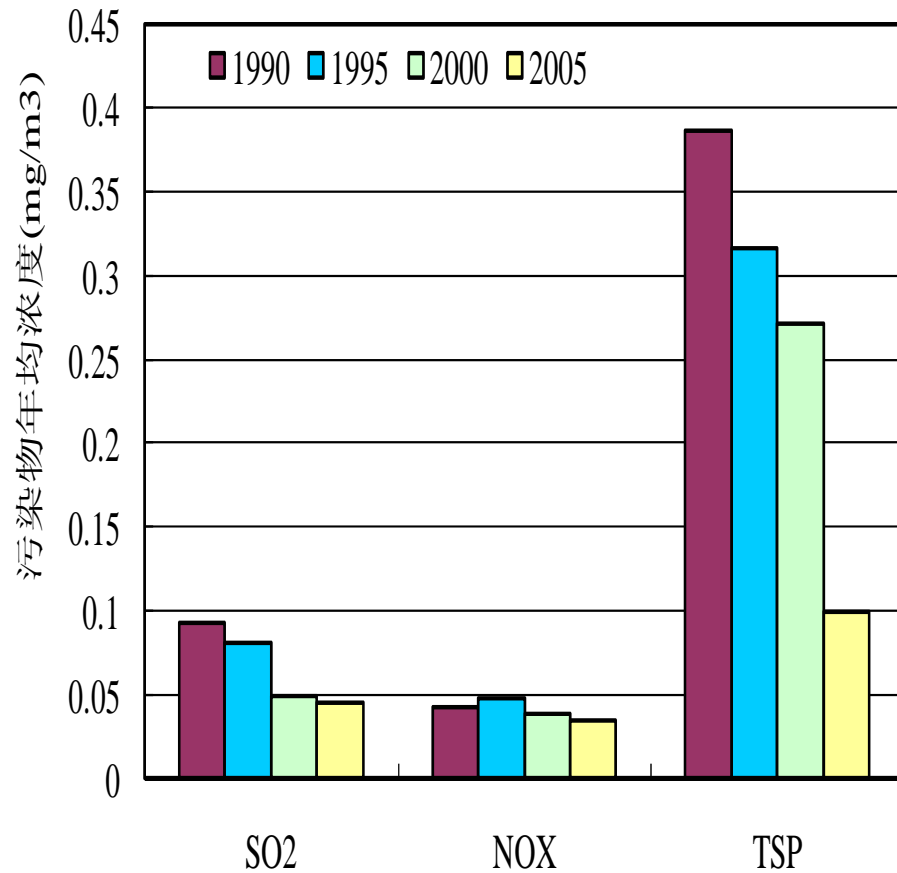


SO2 emission intensity per year 1997-2006



COD emission intensity per year 1997-2006

2. Efforts and Achievements on Pollution Control and Emission Reduction in China

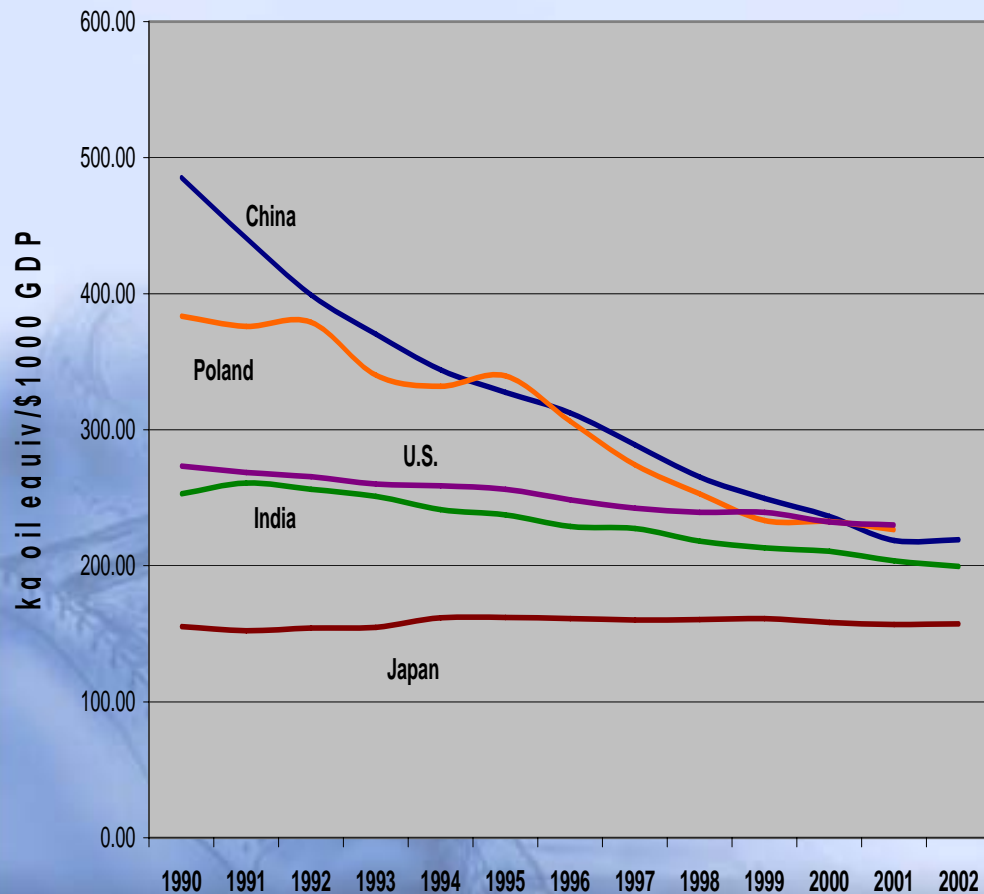


Key air pollutant changes from 1990 to 2005

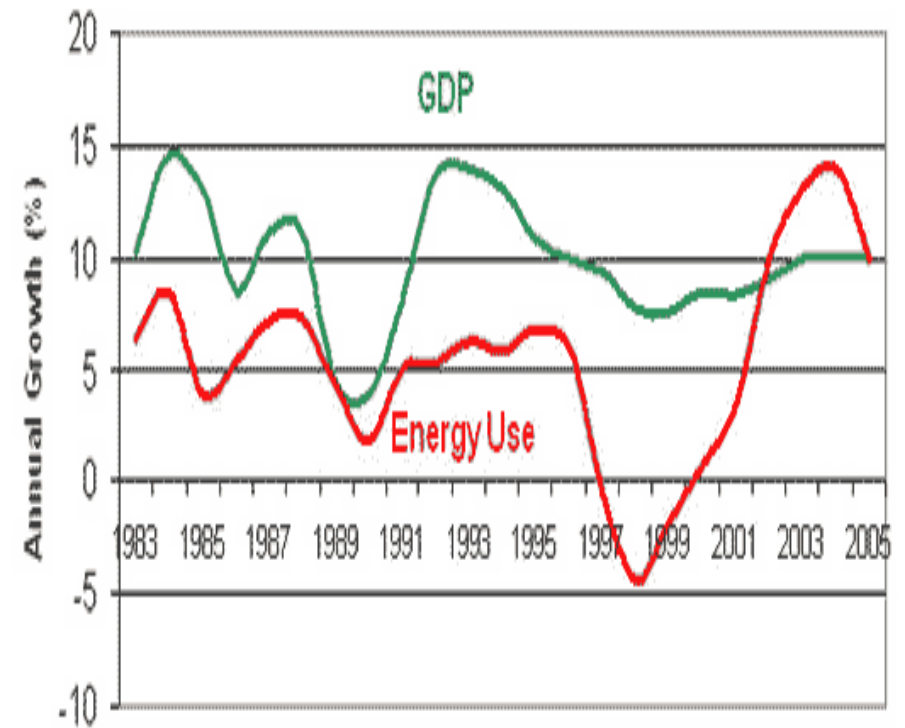
GDP Growing in China from 1997 to 2007

2. Efforts and Achievements on Pollution Control and Emission Reduction in China

Energy Use Intensity (1990 - 2002)



China's Energy Consumption and GDP, Annual Growth



Sources: *China Statistical Yearbook* and World Resources Institute estimates. Includes changes announced in late 2005.

3.Promotion of Environmental Industry

General situation

- About 12,000 non-state owned enterprises with annual income over 20,000RMB(2,950USD) in China
- About 1,600,000 employee
- In 2008, output value of energy-saving and environmental protection industry in China reached 1.41 trillion yuan, accounting for GDP, 4.7%. Among them, energy-saving industry, 270 billion yuan, resource recycling industry, 660 billion yuan, environmental protection industry, 480 billion yuan.

3.Demands of EGS in Chinese Market

Demand of investment during 2006-2010

- a) Urban sewage treatment: 210 billion Yuan
- b) Urban garbage treatment: 50 billion Yuan
- c) De-sulfurtration of power sector: 30 billion Yuan
- d) Hazardous wastes treatment: 15 billion Yuan
- e) Ecological restoration: 4 billion Yuan
- f) Nuclear safety: 1.6 billion Yuan
- g) Rural environmental protection Program: 5 billion Yuan
- h) Capacity building: 15 billion Yuan

3.Demands of EGS in Chinese Market

- **Demand for indoor environmental quality improvement**
 - **Building, painting and decoration materials**
 - **Furnatures**
- **Demand for global environment**
 - **MEAs implementation**
 - **UNFCCC**
 - **Montreal Protocal**
 - **Etc**

4. Gain Co-benefits Following the Trends of Green Economy

- **Contents**

- National Climate Change Plan (NCCP)
- Concept of Co-benefits and co-control
- International Promotion Program

4. Gain Co-benefits Following the Trends of Green Economy -----(1) National Climate Change Plan (NCCP)

- Issued on June 5, 2007
- The first one among non-Annex I countries
- Major components
 - State of Art
 - impacts of climate
 - principle and objectives
 - policy and measures
 - international cooperation
- Key principles
 - Sustainable development
 - Mitigation and adaptation
 - Policy integration and coordination with other sector policies
 - Technology innovation
 - Common but differentiated responsibilities
 - Active international cooperation

4. Gain Co-benefits Following the Trends of Green Economy -----(1) National Climate Change Plan (NCCP)

■ Quantitative Targets

● Mitigation

- 20% energy intensity reduction during 2006-2010
- By 2010 renewable energy taking up 10% of total energy and nuclear energy 4% of total
- By 2010 N₂O keeping at the same level of 2005
- Control paddy rice and animal methane
- 50 million ton of carbon sequestration increase during 2005-2010

4. Gain Co-benefits Following the Trends of Green Economy -----(1) National Climate Change Plan (NCCCP)

- Targets
 - Mitigation
 - Adaptation
 - R&D
 - Public Awareness and local management
- Policy and control measures
- Demand of International cooperation
 - Technology cooperation and technology transfer
 - Capacity building

4. Gain Co-benefits Following the Trends of Green Economy -----(2) Co-benefits and co-control

■ Review of co-benefits

- Ancillary benefits estimation with OECD, ECON, SEPA**
- Shijiazhuang Case, West-east Pipeline Case under support of SEPA, Petro-China**
- Shanghai Case, Beijing Case, National assessment of co-benefits under support of USEPA-IES**
- Shangxi Taiyuan case by CICERO, ECON, NILU etc**
- GAINS model of China by IIASA, ERI**
- Panzhihua case study support by OECC**
- RFF-Harvard, Tsinghua Univ. study**
- Energy Foundation-Renmin University of China in Henan Province**
- Co-control policy design by MEP/DRC - ECON/CICERO team**

4. Gain Co-benefits Following the Trends of Green Economy -----(2) Co-benefits and co-control

- **Review of co-benefits**
 - **Stage 0 pre-co-benefit period:**
 - local pollution control policy and climate change policy were considered independently without links
 - **Stage 1 Ancillary benefit or Secondary benefit period:**
 - Ancillary benefits or secondary benefits of GHGs reduction were aware
 - **Stage 2 co-benefit measurement period:**
 - it's realized that local pollution and GHGs are mutually linked to each other and efforts are made to measure co-benefits
 - **Stage 3 co-control design period:**
 - co-control policies/programs/projects are designed and proposed in order to maximize co-benefits
 - **Stage 4: co-control implementation period :**
 - co-control policy and projects are designed and implemented

4. Gain Co-benefits Following the Trends of Green Economy -----(2) Co-benefits and co-control

- Concept of co-control
 - Objective: to maximize net benefits (benefits minus control costs) by designed control measures
 - Total costs of all control measures
 - Benefits of both air pollution and GHGs as well as other external benefits
 - Target: both local pollutants and GHGs
 - Ways: to **actively** control both GHGs and local pollutants
 - Dimensions: technology, project, program, plan, policy etc

4. Gain Co-benefits Following the Trends of Green Economy -----(2) Co-benefits and co-control

- Concept of co-control
 - Principle
 - To identify the control measures of nationally appropriate mitigation actions (NAMAs), including technologies, projects, programs, plans, policies, in order to maximize net benefits
 - Abatement cost curves
 - GHGs reduction abatement cost curves of technologies etc.
 - Pollution abatement cost curves of technologies etc.
 - Integrated abatement cost curves of technologies etc.
 - Benefits
 - Effectiveness of pollution and GHGs reduction
 - Integrated benefits of pollution and GHGs reduction
 - To maximize net benefits
 - $\text{Net benefits} = \text{Integrated Benefits} - \text{Integrated Costs}$
 - To maximize it!
 - Co-control is the critical approach to figure out NAMAs

4. Gain Co-benefits Following the Trends of Green Economy -----(2) Co-benefits and co-control

- **International Promotion Program**
 - **China-Norway co-benefits study**
 - **USEPA-IES study**
 - **OECC-IGES Panzhihua case study**

5. China's Efforts to Support CTESS

- **Comments on current WTO-CTE negotiation**
 - **Trade interest driven rather than environmental demand driven**
 - Environment is used by trade officials as an excuse to promote exports
 - **National interest driven rather than global interest driven**
 - It's very necessary to have global environmental goods to improve global environment
 - **Lack of coherence with MEAs**
 - Not mutually supportive
 - Even conflicting

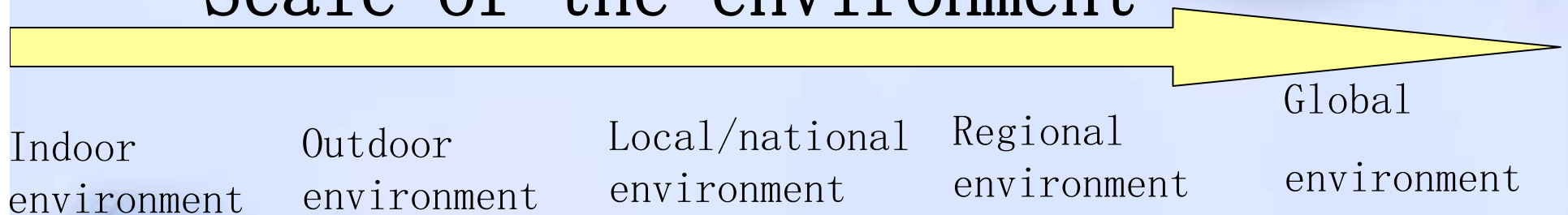
5. China's Efforts to Support CTESS

- Definite environmental industries for producing EGS based on the demand of environmental challenges at the whole spectrum
 - The EGS for improving indoor-environment
 - The EGS for improving outdoor, local and regional environment (conventional ones)
 - The EGS for improving global-environment

5. China's Efforts to Support CTESS

-----Redefine environmental industry and EGS

Scale of the environment



Indoor
Environmental
Goods and
Services

Micro

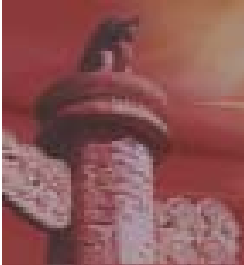
Conventional
Environmental
Goods and
Services

Macro

Global
Environmental
Goods and
Services



Thank you!



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