

China's Policies and Prospects for Addressing Climate Change

Ms. HUANG Wenhong, Director,
International Cooperation Division,
Department of Climate Change,
National Development and Reform Commission, PRC

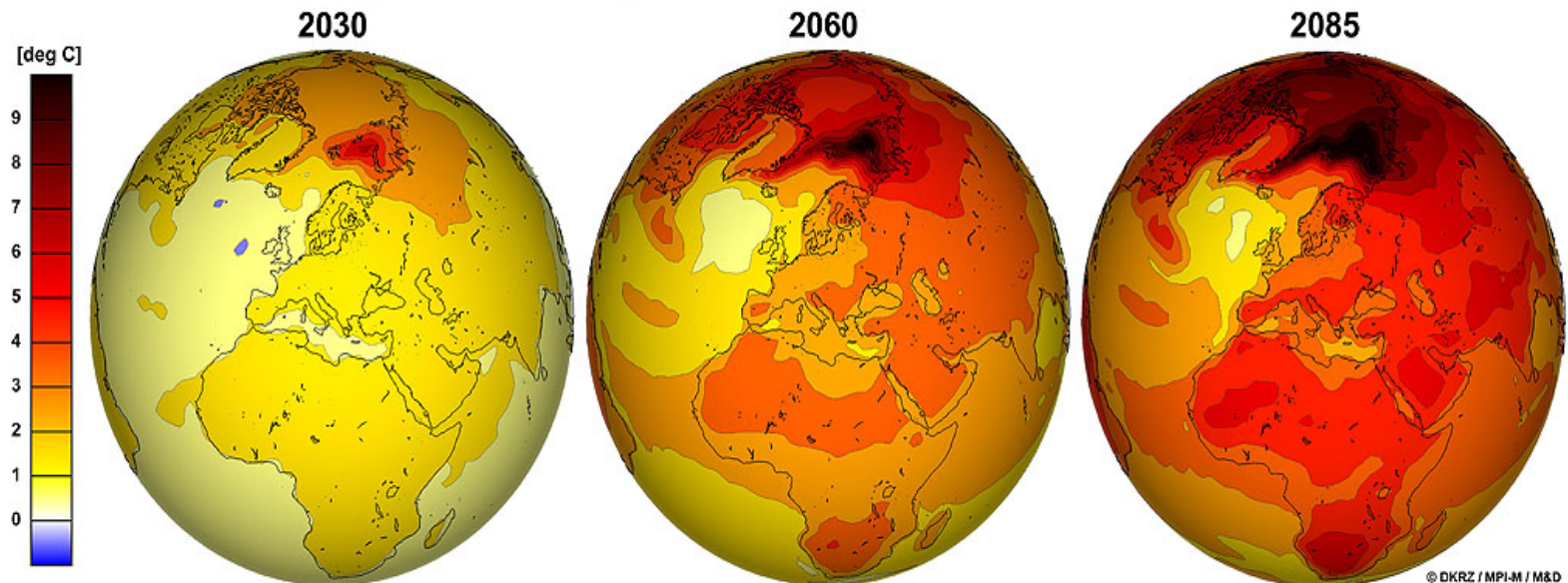


Facts of Climate Change

The latest scientific research findings show that the global average surface temperature has increased by 0.74°C over the past century, and is expected to rise by $1.1\text{--}6.4^{\circ}\text{C}$ by the end of the 21st century.

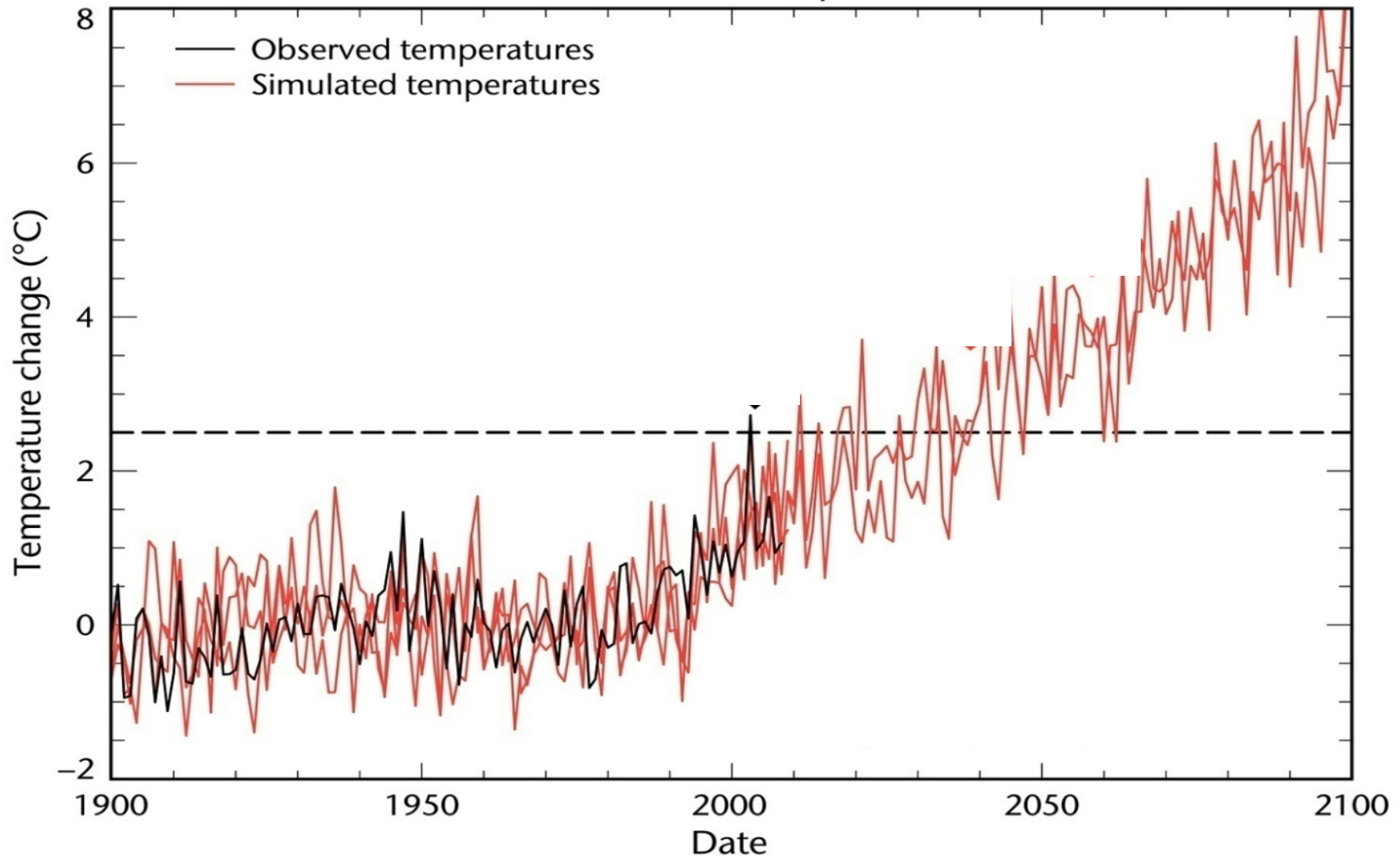
---- The 4th Assessment Report of IPCC

Simulated Temperature Change with ECHAM5 / MPI-OM: IPCC Scenario A1B



Facts of Climate Change

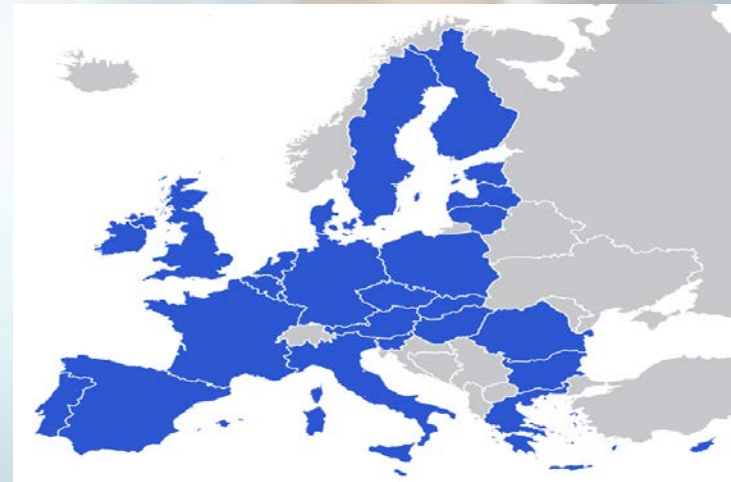
Western Europe



Global Trend of Low-Carbon Development

The EU Roadmap to a competitive low carbon economy in 2050: Investing in a low carbon future

- ❖ Prepare for reduction in domestic emission by 80% by 2050 compared to 1990
- ❖ Prepare for reduction in domestic emission and energy consumption by 20% by 2020 compared to 1990, and increase the share of renewable in energy mix to 20%
- ❖ Explored pathways for key sectors: power, industry, transport, residential...



Global Trend of Low-Carbon Development

The UK low-carbon transition plan:

- ❖ The plan aims to deliver emission cuts by 18% by 2020 on 2008 level or by 34% on 1990 level
- ❖ 40% of electricity from low-carbon resources.
- ❖ 3.2 billion pounds for energy efficiency households
- ❖ Development of offshore wind power

The UK Low Carbon
Transition Plan

Realising energy security and energy

ROADMAP 2050

A PRACTICAL GUIDE TO A PROSPEROUS,
LOW-CARBON EUROPE

Climate Change and China's Circumstances

1

A complex climate and a fragile ecological environment

2

Large population and relatively low level of development

3

Ongoing industrialization and urbanization process and its coal-dominated energy mix

China's Climate Policies and Actions

The Chinese government has taken addressing climate change and development to a green low carbon development as a tremendous opportunity.

The 11th Five Year Plan period is a significant period for China to undertake climate change related work, during which significant achievements were made:

- ❖ Achieved the energy intensity reduction target of 19.1%
- ❖ National climate change plan was formulated and implemented
- ❖ Low-carbon pilots were launched
- ❖ Efforts were made to adapt to climate change
- ❖ Climate international cooperation enhanced
- ❖ ...



China's Climate Policies and Actions

- ❖ The Twelfth Five Year Plan(12th FYP) on National Economic and Social Development
- ❖ Comprehensive Work Plan for Energy Conservation and Emission Reduction
- ❖ Comprehensive Work Plan for Greenhouse Gas Emission Control
- ❖ White Paper on China's Policies and Actions for Addressing Climate Change



China's Climate Policies and Actions

**12th FYP sets forth
a series of targets by 2015
(annual growth rate 7%)**

1

Carbon-intensity reduction target of 17%

2

Energy intensity reduction target of 16%

3

Non-fossil fuel increases to 11.4%

4

Pollutants reduction targets 8-10%

5

Forest coverage increased to 21.66%

China's Climate Policies and Actions

TASKS REQUIRED BY 12TH FIVE YEAR PLAN:

- ❖ In the area of GHG emission reduction: actively promote energy conservation and energy intensity, increase forest stock, develop the energy, industry, construction, transportation system and healthy living style characteristic of low emission. Increase the percentage of non-fossil fuel, promotion of energy-conservation technology and products
- ❖ In the area of adaptation to climate change: develop effective measures to adapt to climate change in the areas of agriculture, forest, waters as well as areas that are vulnerable to impacts of climate change; strengthen research, data collection and monitoring; develop precaution measures to extreme weather disasters
- ❖ In the area of international cooperation: enhance the position of climate change int'l cooperation as a country strategy and continue to deepen concrete cooperation with major developed countries and international development institutions; support other developing countries and climate change vulnerable countries to combat climate change

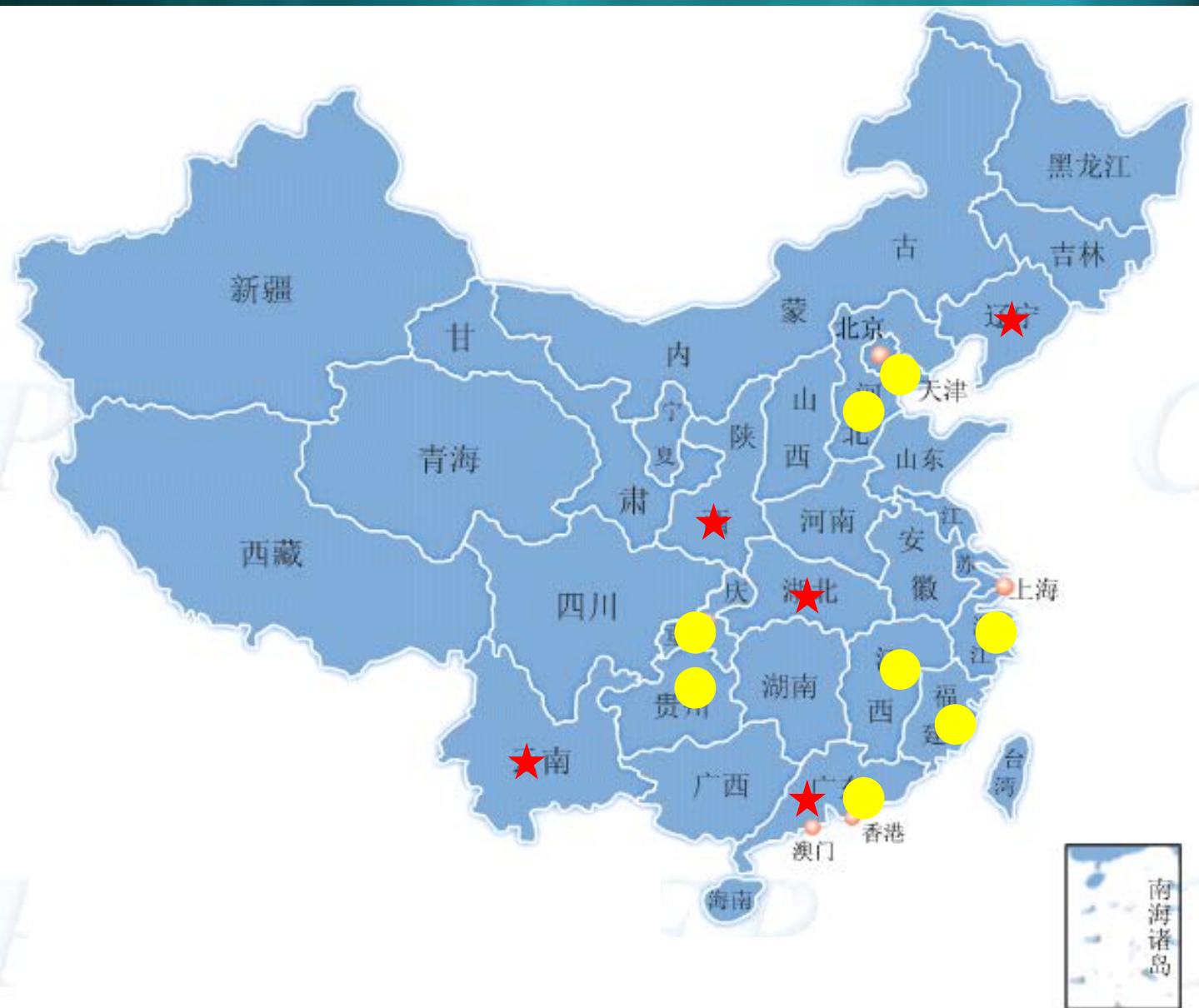
China's Climate Policies and Actions

COMPREHENSIVE WORK PLAN FOR GHG EMISSION CONTROL

- ❖ Low carbon pilot: provinces, cities, industry park, commercial district, society, products, oceanic creature sink, industry process, CCUS and substitute pilot projects
- ❖ Gradually establish ETS market mechanism
- ❖ Promote social low carbon campaigns
- ❖ Promote low carbon international cooperation
- ❖ Capacity building and financial support
- ❖ ...



China's Climate Policies and Actions



Low Carbon Pilots

- Guangdong
- Liaoning
- Hubei
- Shaanxi
- Yunnan
- Tianjin
- Chongqing
- Shenzhen
- Xiamen
- Hangzhou
- Nanchang
- Guiyang
- Baoding

ETS Pilots

- Beijing
- Tianjin
- Shanghai
- Chongqing
- Guangdong
- Hubei
- Shenzhen

China's Climate Policies and Actions

EMISSION TRADING SYSTEM PILOTS

- ❖ Beijing, Tianjin, Shanghai, Chongqing, Guangdong, Hubei, Shenzhen
- ❖ GHG emission control targets
- ❖ Comprehensive work plan for ETS pilot
- ❖ ETS management rules and regulations
- ❖ ETS registry system and trading platform
- ❖ Financial resources
- ❖ Full-time team



China's Climate Policies and Actions

NEW AND RENEWABLE ENERGY

- ❖ Implement the policy of active development of hydropower and strive to start construction of hydropower of 140 GW
- ❖ Promote wind power to reach 100 GW, of which ocean wind power will be 50 MW
- ❖ Solar power industry will focus on power generation and national installed capacity of solar photovoltaic will reach 10 GW
- ❖ To achieve diversification of biomass and build up 100 model cities for the use of new energy



China's Climate Policies and Actions

CARBON CAPTURE, UTILIZATION AND STORAGE

- ❖ At present, CCUS is still at the research and pilot stage
- ❖ In order to achieve long-term GHG emission reduction, China will gradually promote the development of CCUS according to its circumstances
- ❖ Thus, international collaboration in this regards is fairly vital for the further development of this tech, China will to carry out research and deploy and meanwhile seeking supports on funds, technology transfer and capacity-building



China's Climate Policies and Actions

OFF-SHORE WIND POWER

China will speed up the construction of ocean wind power plant and formulates relevant technical standards for the preliminary work of ocean wind power plant construction



Set up ocean power program of 1GM in coastal regions with rich wind



Power resources, such as Shanghai, Jiangsu, Hebei and Shandong



To carry out bidding process for ocean wind power concession

China's Climate Policies and Actions

LOW CARBON STANDARD & LABELING

- ❖ Carbon accounting and labeling instruments analyze and present information on carbon emissions of products in an attempt to identify major sources of emissions in supply chains
- ❖ These standards could be expected to benefit many people in developed consumer societies
- ❖ Governments would benefit from a widespread carbon standard, which would raise consumer awareness of the carbon implications of their purchases



China's Climate Policies and Actions

CARBON MARKET

Two types of carbon market exist; the regulatory compliance and the voluntary markets

Compliance Market

The compliance market is used by companies and governments that by law have to account for their GHG emissions.

Voluntary Market

On the voluntary market the trade of carbon credits is on a voluntarily basis

China's Climate Policies and Actions

CARBON MARKET

The three Kyoto Protocol mechanisms are very important for the regulatory market:

❖ Clean Development Mechanism (CDM)

For developing countries the CDM is of most interest among the regulatory market mechanisms

❖ Joint Implementation (JI)

JI is set forth in Article 6 of the Kyoto Protocol. Under Article 6, any Annex I country can invest in emission reduction projects in any other Annex I country as an alternative to reducing emissions domestically

❖ Emission Trading System (ETS)

Emissions trading (also known as cap and trade) is a market-based approach used to control pollution by providing economic incentives for achieving reductions. It is a form of carbon pricing

The carbon credits from CDM projects called Certified Emission Reductions (CER). According to UNDP research, many energy efficiency & renewable energy related CDM project is going on in Arabic countries and the potential to carry out CCS project in this area is huge.

China's Climate Policies and Actions

CARBON MARKET

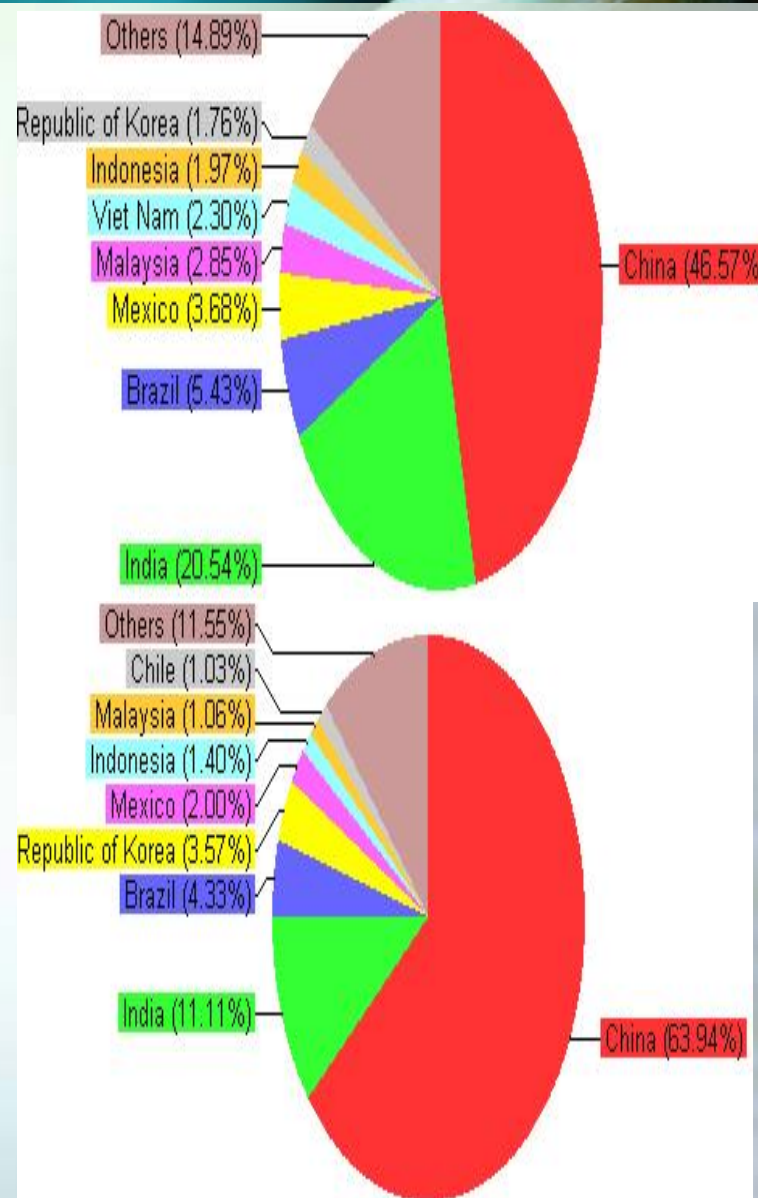
- ❖ Global carbon market is developing rapidly
- ❖ Up to now, 3646 projects have been registered by the CDM Executive Board as CDM projects
- ❖ These projects reduce greenhouse gas emissions by an estimated 545 million ton CO₂ equivalent per year
- ❖ There are about 5,600 projects yet to be certified. These projects would reduce CO₂ emissions by over 2.7 billion tons until the end of 2012



China's Climate Policies and Actions

CARBON MARKET IN CHINA

- ❖ China has actively promoted the development of CDM projects
- ❖ The Management Measures on the Operations of the CDM Projects was endorsed and revised recently
- ❖ By 16 Nov 2011, 3420 CDM projects were approved by China
- ❖ By Dec 14, 2011, 1698 CDM projects of China (46.57% of world total) were registered by EB with an estimated greenhouse gas emissions reduction by 348 million ton CO₂ equivalent per year or 63.94% of world total
- ❖ China's experience in CDM projects could be readily adapted and disseminated to other developing countries



China's Climate Policies and Actions



The 12th Five Year Plan calls for the development of National Climate Change Adaptation Strategy

- ❖ Considering climate change factors in productivity layout, infrastructure and the design and implementation of key projects
- ❖ Explore the use of insurance and other financial services products to complement adaptation measures
- ❖ Explore market-based instruments and public-private partnerships to enhance resilience

China's Climate Policies and Actions

INNOVATING FINANCING FOR ADAPTATION



Call for funding window for adaptation in Green Fund under UNFCCC



Explore fixed fiscal budget for adaptation activities



Enhance exchange and cooperation with finance organizations

We are open to exchange ideas and
explore further cooperation
in addressing climate change ...

Thank You !

谢谢！

