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# Chapter ① 气候变化与中国国情

CLIMATE CHANGE AND CHINA'S NATIONAL CONDITIONS

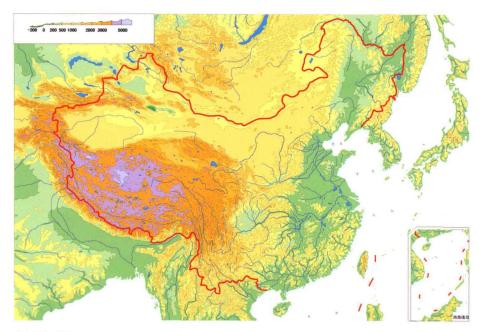


## 中国气候条件复杂, 生态环境脆弱

China: Complex Climatic Conditions and A Fragile Eco-environment

中国主要属于大陆性季风气候,大部分地区的气温季节变化幅度要比同纬度其他 陆地地区相对剧烈,很多地方冬冷夏热,夏季全国普遍高温。

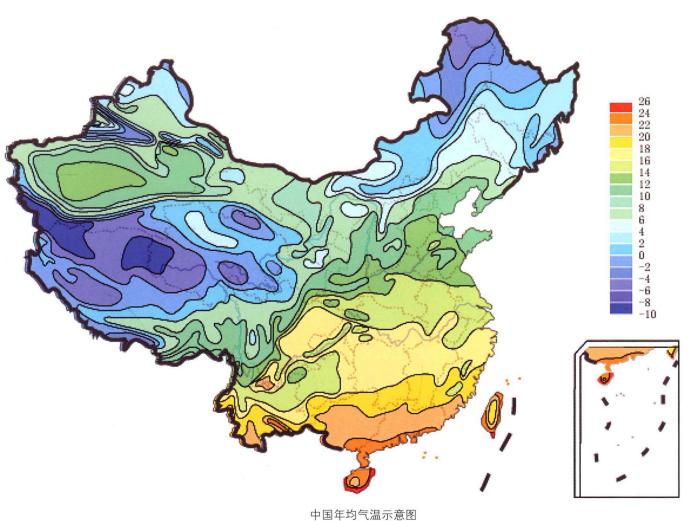
China is characterized by a continental monsoon climate, and most parts of China have a wider range of seasonal temperature change compared with other continental areas at the same latitude. Many places in China are cold in winter and hot in summer, and high temperatures generally prevail in the country at large in summer.



中国地形图 China's Topographic Map



卫星影像图 Satellite Image Map



中国中均气温示息图 China's Schematic Diagram of Annual Average Temperature



降水时空分布不均,多集中在汛期,且地区分布不均衡,年降水量从东南沿海向西北内陆递减。生态环境比较脆弱,水土流失和荒漠化严重。自然湿地面积相对较少,草地大多是高寒草原和荒漠草原,北方温带草地受干旱、生态环境恶化等影响,正面临退化和沙化的危机。

Precipitation is unevenly distributed in time and space, concentrating in the flood season, and annual precipitation decreases from the southeast coast to the northwest inland. The eco-environment is relatively fragile with serious soil erosion and desertification. The area of natural wetlands is comparatively small, and most grasslands are highly frigid meadows and desert steppes. The temperate grasslands in northern China are in danger of degeneration and desertification due to the impacts of drought and deterioration of the eco-environment and other factors.



2012年7月29日,北京气温达到摄氏35度,炎热难耐,很多儿童在大人带领下高兴地玩水消暑。 On July 29, 2012, Beijing was extremely hot whose temperature reached 35 degrees centigrade, and many children were dabbling happily in the water for eliminating summer heat in company with their parents.



Climate Change and China's National Conditions



被黄沙围困的河北丰宁榔头村 Langtou Village, Fengning County in Hebei Province is besieged by sands.



中国大陆海岸线长达 1.8 万多公里,易受海平面上升带来的不利影响。全球气候变化进一步对中国生态环境产生了诸多不利影响。

With a coastline over 18,000 km long, China is vulnerable to the adverse effects of sea level rises. The global climate change will have further adverse impacts on China's eco-environment.



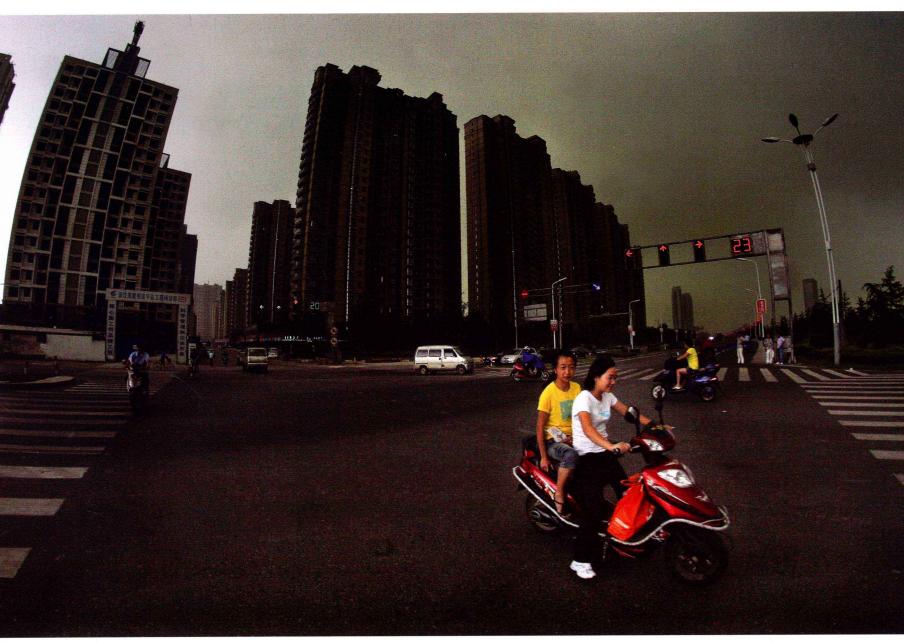
2011年8月5日,浙江温岭,为应对台风来袭,边防官兵正在拉警戒带。 On August 5, 2011, frontier soldiers were preparing to cordon off police tape in Wenling City of Zhejiang Province.



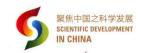
2011年6月26日,强热带风暴影响山东烟台。市民顶着风雨前行。 On June 26, 2011, severe tropical storm influenced Yantai, Shandong Province. Citizens were walking against the wind and rain.

#### 气候变化与中国国情

Climate Change and China's National Conditions



2011年6月25日,浙江绍兴受到台风"米雷"外围云系侵袭,黑云压城、白昼如夜。 On June 25, 2011, Shaoxing of Zhejiang Province was hit by typhoon "Meari" periphery nephsystem, which made a very dark day seem bright.

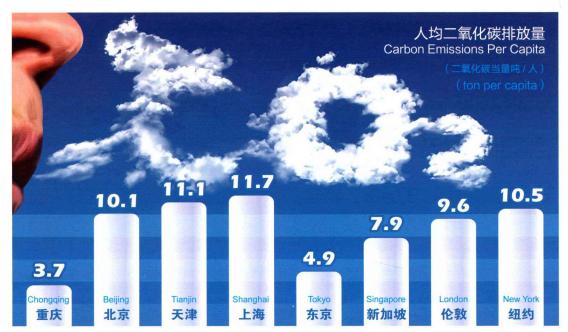


## 中国人口众多, 经济发展水平较低

#### A Large Population and a Relatively Low Level of Economic Development of China

中国是世界上人口最多的国家。2011年底中国大陆人口(不包括香港、澳门、台湾)达到 13.47亿,约占世界人口总数的 20%。庞大的人口基数,使中国面临巨大的就业压力,每年有 1000万以上新增城镇劳动力需要就业,同时随着城镇化进程加快,每年有上千万的农村劳动力向城镇转移。据国际货币基金组织统计,2011年中国人均国内生产总值为 5414美元,在 181个国家和地区中位居第 89位,仍为中下收入国家。中国区域经济发展不均衡,城乡居民之间的收入差距较大。按照联合国的扶贫标准,中国仍有上亿贫困人口,发展经济和改善人民生活水平是现阶段中国的基本任务。

China has the largest population in the world. The population of the mainland of China (except for Hong Kong, Macao and Taiwan) reached 1.347 billion at the end of 2011, accounting for 20% of the world's population. The large population brings huge employment pressure. More than 10 million new urban laborers need jobs every year. Meanwhile, as the urbanization process moves forward, tens of millions of rural laborers transfer to the urban areas every year. Statistics from the International Monetary Fund show that, the per-capita GDP (gross domestic product) of China in 2011 was US\$5,414, ranking 89<sup>th</sup>, a low-to-middle place, among 181 countries and regions. An unbalanced regional economic development characterizes China and it is still nagged by a large income gap between urban and rural residents. According to the poverty alleviation line of the United Nations, there are still over 100 million impoverished people in China. Thus, developing an economy and improving people's lives are the basic tasks of China at present.



2012年5月4日,世行发布报告称,部分中国城市的 人均碳排放量已在全球最高之列,上海、北京、天津 等地碳排放量远远高于东京、新加坡、伦敦等地。

On May 4, 2012, the World Bank releasd a report which declared that carbon emissions per capita in some cities of China ranks the highest in the world and the carbon emissions in Shanghai, Beijing, and Tianjin are much higher than that of Tokyo, Singapore and London.

#### 气候变化与中国国情

Climate Change and China's National Conditions



等候进入北京故宫参观的人群 The crowds are waiting for visiting the Forbidden City.





位于中国西部的西藏自治区,地广人稀,人口密度仅为每平方公里2.21人。

Tibet Autonomous Region, in the western China, with a total area of 1.22 million square kilometers but only has 2.21 people per square kilometer on average.



贵州从江岜沙苗寨,一位妇女背着自己的孩子在自家破旧的木屋前。

A woman carrying her child is in front of her own shabby wooden shack in Basha Miao stockade village, Congjiang County of Guizhou Province.



陕北牧牛人 The Cattle herder in northern Shaanxi.



## 中国面临能源安全的挑战

#### Challenge of Energy Security in China

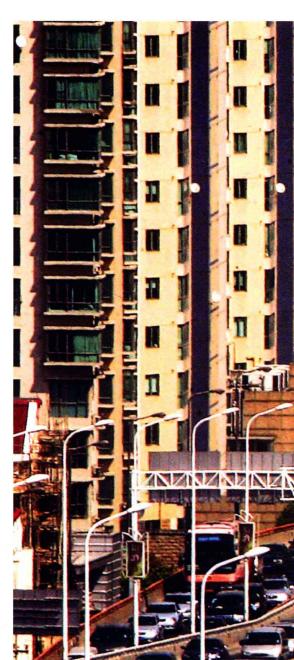
中国人均能源资源拥有量在世界上处于较低水平,石油、天然气人均资源量仅为世界平均水平的 1/15 左右,即使储量相对丰富的煤炭资源也只有世界平均水平的 50%。

The per capita possession of energy resources of China is relatively low in the world. Per capita possession of petroleum and natural gas is only about 1/15 of the average level in the world, even the per capita possession of the relatively rich coal resource is only 50% of the world average.



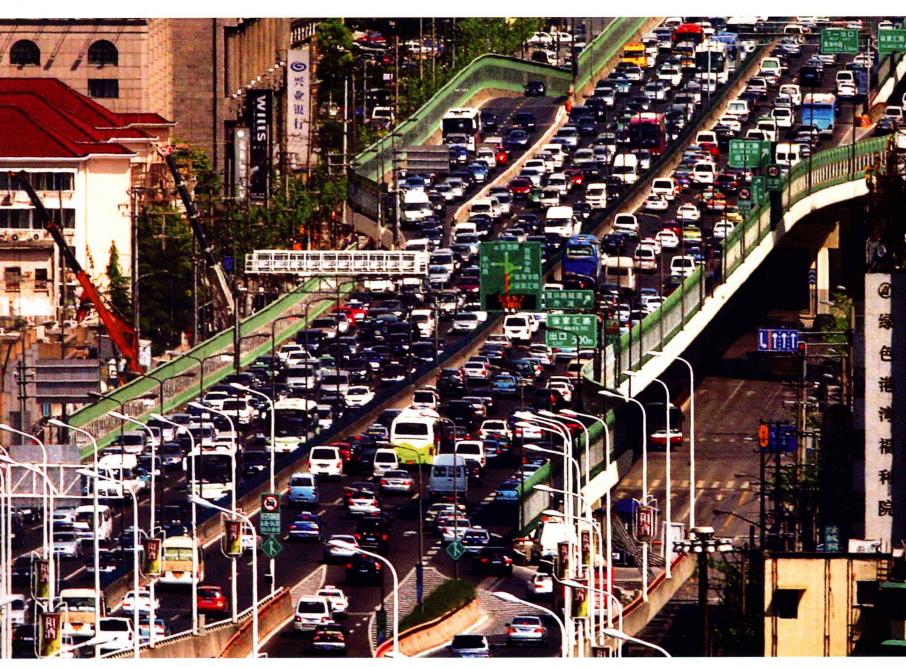


In Qinhuangdao of Hebei Province, the coal is waiting for shipment at the harbor.



### 气候变化与中国国情

Climate Change and China's National Conditions



上海一高架桥上密集的车流

A heavy traffic is on an overhead viaduct of Shanghai at its peak.



## Chapter 2 气候变化对中国的影响 IMPACT OF CLIMATE CHANGE ON CHINA

近百年来,地球气候正经历一次以全球变暖为主要特征的显著变化。根据政府间气候变化专门委员会(IPCC)2007年发布的第四次评估报告,1906~2005年全球地表平均温度升高了0.74℃,1961~2003年全球海平面上升的平均速率为每年1.8毫米。中国气候变暖趋势与全球的总趋势基本一致,1908~2007年地表平均气温升高了1.1℃,高于世界平均水平。近50年来中国降水分布格局发生了明显变化,西部和华南地区降水增加,而华北和东北大部分地区降水减少。高温、干旱、强降水等极端气候事件呈现频率增加、强度增大的趋势。全球气候变化已经对中国农牧业、森林与自然生态系统、水资源和海岸带等造成了影响。

Over the last century, the earth's climate has been experiencing a significant change featured by global warming. The fourth evaluation report issued by Intergovernmental Panel on Climate Change (IPCC) in 2007 showed that, the average surface temperature has risen by 0.74 from 1906 to 2005 and the average rising rate of global sea level was 1.8mm from 1961 to 2003. China's temperature rise has basically kept pace with global warming. The average temperature of the earth's surface has risen by 1.1 from 1908 to 2007, which was higher than the world average. The national distribution of precipitation in the past half century changed obviously, with increases in western and southern China and decreases in most parts of northern and northeastern China. Extreme climate phenomena such as high temperatures, severe droughts and heavy precipitation have been increasing in frequency and intensity. Global climate change has already produced adverse effects on China's agriculture and animal husbandry, forestry, natural ecosystems, water resources and coastal zones.