**CHINA FACTS AND TRENDS**

**1. Demography:**

* Population 2006: 1,313,973,700; 20% of the Earth’s population; growing around 10 million a year.
* Population growth rate 2006: 0.59%; projected population 2025: 1,453,123,817; projected population 2050: 1,424,161,948 (India’s population in 2050 projected at 1.6 billion).
* Crude birth rate: 13.25 births/1,000 population; crude death rate: 6.97 deaths/1,000 population.
* Age structure 2006: 0-14 years: 20.8%; 15-64 years: 71.4%; 65 and older: 7.7%.
* Number of workers 2004: 767.976,680; three times that of Europe; twice that of North and South America combined; increasing by about 14 million annually.
* Official estimates put the country’s floating population, or internal migrants, at 147 million.
* Population density 2006: 141 persons per sq km or 365 persons per sq mi (71 nations more densely populated).
* China’s geography causes an uneven population distribution: 94% (1.2bn) live in the eastern third of the country; remaining 6% populate the western deserts, high plateaus and mountains.
* A projected decrease in Chinese household size from 4.5 people per house in 1985 to 3.5 people per household in 2000 to 2.7 people by the year 2015 will add 126 million new households (more than the current number of U.S. households).
* By 2020 the Chinese middle class is forecast to double by over 40%, i.e., 520-700 million people, almost twice the size of the U.S.
* China’s “Generation Y” (GenY) is a generation of approximately 240 million people born between 1980 and 1990, and is characterized by its optimism for the future, newfound excitement for consumerism and entrepreneurship, and acceptance of its historic role in transforming China into an economic superpower.
* By 2040 around one third of the projected population—some 400 million people—will be over the age of sixty (the figure in 2005 was 147 million, 80% of them living in rural areas); McKinsey has already identified a deficit of $110 billion in the provisions made for pension liabilities.
* The number of retired persons per 100 working people (between 15-64) was 10 in 2000 and will rise to almost 40 by 2050 (i.e., 60 people will be supporting 100, including pensioners).
* There are 1.13 males for each female under 15 years old due to sex-selective abortion and female infanticide due to a strong preference for sons; by 2030 China may have 30 million “surplus” men who will be unable to find a wife.
* China’s population control program has been weakened by popular resistance, changes in central policies and loss of authority by rural cadres.

**2.** **Economy/Consumption:**

* China’s economy has been growing at an average rate of more than 9.5% annually for the past 28 years, four times the rate of first world economies; the Government hopes to raise GDP from US$ 1 trillion in 2000 to 4 trillion by 2015.
* The Asian Development Bank forecasts that China could become the world’s largest economy as measured by GDP, surpassing the U.S., as soon as 2025.
* The composition of GDP by sector in 2006: agriculture=16.9%, industry=48%, and services=40%; labor force by occupation: agriculture=45%, industry=24% and services=31%.
* The size of the underground economy not captured in official statistics could amount to about one-third the size of the official economy.
* As of 2006, the State still owned nearly 60% of fixed assets and dominates vital industrial sectors from energy to financial services, accounting for about 40% of GDP.
* China’s share of world exports is expected to rise from 6% today to 10% by 2010; China’s exports to the U.S. have grown by 1600% over the past 15 years; 70% of all Christmas gifts in the U.S. are made in China.
* China, as of the early 2000s, surpassed the U.S. in the absolute annual consumption of grain, meat, coal, steel, fertilizer, cellular phones, TV sets, refrigerators, cement and aquacultured food (the U.S. still leads on oil, personal computers and automobiles).
* Over $170 billion of foreign direct investment went to China during 2003-06; analysts expect the annual flow of foreign investment to remain at US$ 50 billion for at least the next decade.
* China needs to generate some 15 to 24 million new jobs each year to absorb new entrants to the job market and to reduce persistent unemployment.
* In 2005 China used 26% of the world’s crude steel, 32% of the rice, 37% of the cotton, and 47% of the cement; China is likely to construct half of the world’s new buildings over the next decade.
* China’s imports of aluminum, nickel, copper, and iron ore are expected to rise from an average of 7% of world demand in 1990 to a predicted 40% in 2010.
* The Brookings Institution estimates that up to 50% of Chinese bank loans made to state enterprises are “non-performing,” unlikely to ever be repaid.
* After reaching a peak of 113 million employees, urban state owned enterprises have cut down their employment by more than a third.
* China’s luxury goods market is expected to grow 10-20% annually until 2015, overtaking the U.S. and Japan, to consume 29% of total world luxury sales.
* If consumption per person in China were to reach U.S. levels, China would be consuming 67% of current world grain harvests, 80% of world meat production, 110% of world coal consumption, 120% of world oil consumption, and 200% of world paper consumption.

**3.** **Poverty/Inequality:**

* Since opening and reform in 1979, an estimated 300-400 million Chinese people have been lifted out of poverty (1 US$ a day), a historical accomplishment.
* Some 600 million Chinese still attempt to live on less than 2 US$ a day.
* According to the World Bank, “more than 160 million Chinese, many in remote and resource poor areas in the western and interior regions, still have consumption levels below a dollar a day, often without access to clean water, arable land, or adequate health and educational services.”
* Since the late 1990s, poverty reduction has slowed markedly in spite of the fact that Chinese economic growth has been the wonder of the world.
* Disparities have widened in recent years, between urban and rural areas, and also between coastal and inland areas.
* In the last 25 years, according to the World Bank, China’s economy has moved from one of the most equitable in the world in terms of income distribution to one of the most inequitable.
* Average annual income per capita in 2003 in China’s urban areas was US$ 1,058; in the rural areas it was US$ 328.
* The top 10% of Chinese earn 33% of national income; the bottom 10% earns only 2%.
* The richest 20% of the Chinese population account for 50% of consumption, while the poorest 20% account for only 4.7%.
* In 2004 the Chinese Academy of Social Sciences warned that “the growing wealth gap is an important factor leading to social and political instability.”
* Urban unemployment is estimated unofficially to be anywhere between 8 and 20% (as compared to the rosy official estimate of 3.6%); rates of unemployment and underemployment are significantly higher in the rural areas.
* The Chinese government hopes to create 100 million new jobs in manufacturing over the next 10 years, equivalent to 1 million new factories.
* A World Health Organization survey measuring the equality of medical treatment placed China 187th out of 191 nations surveyed.
* An estimated 140 million Chinese are malnourished.
* Per capita income is projected to increase from an average of US$ 1,000 today to $3,000 by 2020.

**4.** **Land and Agriculture:**

* About half of China’s land mass is uninhabited, so one-fifth of the world’s population is crowded onto just 7% of the world’s arable land.
* Desertification, due to overgrazing and land reclamation from agriculture, has affected more than one-quarter of China, destroying about 15% of north China’s area remaining for agriculture and pastoralism within the last decade; desertification has adversely affected the lives of more than 400 million people with annual direct economic losses in the range of US$ 50 billion.
* China is one of the world’s countries most severely damaged by erosion, now affecting 19% of its land area and resulting in soil loss at 5 billion tons per year; huge dust plumes travel hundreds of miles to the populous cities of the northeast.
* Salinization has affected 9% of China’s lands, mainly due to poor design and management of irrigation systems in dry areas.
* Some 90% of China’s grasslands are now considered degraded due to overgrazing, climate change, mining and other types of development.
* The area of cropland damaged each year by droughts is now about 60,100 square miles (about 30% of all cropland), double the annual area damaged in the 1950s.
* An estimated 30% of China’s cropland is suffering from acidification, and the resulting damage to farms, forests and human health is projected at US$13 billion per year.
* An estimated one-fifth of all agricultural land has been lost since 1949, as a result of soil erosion, fertility losses, salinization, desertification, urbanization and appropriation of land by industry.
* China’s grain output grew from 90 million tons in 1950 to 392 million tons in 1998—but dropped to 332 million tons in 2003, mainly as a result of the shrinkage of the grain harvested area; China became the largest wheat importer in 2004 importing 8 million tons; the World Bank projects that China will need to import 30 million tons a year by 2020.
* As people in China earn more, they are moving up the food chain, eating more grain-fed livestock products such as pork, poultry, eggs, beef and milk; such grain-intensive consumption increased four fold between 1978 and 2001.
* China’s biodiversity is very high, with over 10% of the world’s plant and terrestrial vertebrate species; about one-fifth of these species are now endangered.
* China is the world’s largest producer and consumer of fertilizer, accounting for 20% of world use; it is the second largest producer and consumer of pesticides, accounting for 14% of the world total.
* China is one of the two leading importers of tropical rainforest timber, making it a driving force behind tropical deforestation; an estimated 44% of this timber is illegally felled.
* Swiss Re estimates that China is highly exposed to natural catastrophes including earthquakes, typhoons and floods; such catastrophes in 1998 produced economic losses equivalent to 3.8% of GDP; only a very tiny fraction of potential losses are currently insured.
* According to the World Wildlife Fund, China’s 2003 ecological footprint per capita was 1.6 global hectares and has grown 82% since 1975; China’s footprint exceeds its indigenous biocapacity by a factor of 100%, implying that China is in a massive ecological deficit, growing only by importing ecological good and services, and appropriating carbon sequestration services. from around the world (note: the U.S. Japan and most European nations are similarly in such a state of ecological deficit).

**5.** **Water**:

* China’s State Environmental Protection Administration announced in June 2006 that the mainland’s pollution scourge is costing the country roughly US$ 200 billion a year, or some 10% in GDP, from lost work productivity, health problems and government outlays.
* China has just 8% of the world’s freshwater to meet 20% of the world’s population; per capita water availability is only one-fourth the world’s average value.
* Water quality in most Chinese rivers and groundwater sources is poor and declining, due to industrial and municipal waste water discharges, and agricultural and aquacultural runoffs of fertilizers, pesticides and manure causing widespread eutrophication.
* China reports that 324 million people, about a quarter of its population, have difficulties in obtaining clean water.
* An estimated 700 million Chinese drink water contaminated with human and animal waste at levels that don’t come close to the government’s minimum standards (below those of the World Health Organization).
* China uses between 7 and 20 times more water to generate a unit of GDP than the developed countries of the world.
* Wetlands have been decreasing in area, their water level has been fluctuating greatly, their capacity to mitigate floods and to store water has decreased, and wetland species have been endangered or gone extinct.
* The northern half of China is literally drying out as rainfall declines and aquifers are depleted by overpumping; northern China has only one-fifth the per capita water supply of south China; the government has embarked on a 50 year, US$57 billion, south-north project to divert water from the Yangtze River to northern cities such as Bejing and Tianjin.
* Aquifers under the northern China plain (source of 50% of China’s wheat) are dropping by 1 to 3 meters a year; Northern China experienced its worst drought in 50 years during Fall 2008.
* Of the 412 sites on China’s 7 main rivers that were monitored for water quality in 2004, 58% were found to be too dirty for human consumption.
* Industrial demand for usable water is expected to increase from 52 billion tons in 1995 up to 269 billion tons in the year 2030.
* The sources of the Yellow River, itself a source of water for 140 million people, are in a crisis according to Chinese scientists, warning that because of climate change the glaciers and underground water systems feeding the river are gravely threatened.
* Over the past 50 years, China has forcibly evicted 13 million people to make way for dams and reservoirs.
* In February 2007, the Chinese government announced a water-saving plan to cut the nation’s water use per unit of GDP by 20% within 5 years.
* The Vice Minister of SEPA has predicted that “the pollution load of China will quadruple by 2020” if nothing is done.

**6.** **Energy:**

* Electricity production 2003: 82.15% from thermal sources; 15.42% from hydroelectric sources; 2.31% from nuclear sources; and 0.13 from renewable sources.
* China relies on high sulfur/high fly ash coal for about 75% of its total energy.
* Twenty years ago, China was the largest oil exporter in East Asia; now it is the second largest oil importer (after the U.S.) in the world; with oil imports climbing at 30% annually, China is likely to surpass the U.S. in oil imports by 2030.
* In 2004, China accounted for 31% of the global growth in oil demand; The International Energy Agency projects that China’s imports of oil will triple by 2030.
* China is increasingly sourcing its oil from U.S. government-deemed “pariah” states such as Venezuela, Sudan, Uzbekistan, Zimbabwe, Iran and Burma.
* China is expected to have 900 gigawatts of energy capacity by 2020, more than double what it had at the end of 2003.
* China consumes more that three times the world energy average to produce one dollar of GDP (4.7 times the average for the U.S., 7.7 times that of Germany, 11.5 times that of Japan).
* China is now the second largest producer of greenhouse gases after the U.S., following a 33% increase in carbon emission between 1990 and 2002 (to 3.4 billion tons).
* If current trends continue, China will become the world’s leader in CO2 emissions, accounting for 40% of the world’s total by the year 2030; The growth rate for CO2 emissions in China for the period 2004-2010 is estimated to be 11% per annum.
* The International Energy Agency forecasts that the increase in greenhouse gas emissions from 2000 to 2030 from China will nearly equal the increase from the entire industrialized world.
* China is estimated to have about 250 gigawatts of potential wind capacity,
* China is building two new coal-fired plants a week to meet its voracious electricity demand in industry and increasingly in homes.
* In the summers of 2004 and 2005, China’s power demand exceeded supply, forcing electric grid managers to subject most of the country’s cities to rolling blackouts.
* At the current pace of climate changed-induced melting, China will lose two-thirds of its high-altitude ice fields by 2050.
* China’s new renewable energy law calls for 10% of its energy to come from renewable sources (including nuclear) by 2020.

**7.** **Transport & Communications:**

* In the 1980s there were virtually no private cars in China; in 2003 there were 16 million; by 2015 China is projected to have 150 million.
* In the east coast cities of China there is now an 80% year-on-year increase in private auto sales.
* Two million cars were produced in China in 2003; 17 million are expected to be produced there by 2020.
* In 2000, Chinese cars required 65 million tons of oil (33% of total demand for oil); by 2020, that figure may rise to 265 million tons of oil (57% of total demand).
* China now has 23,000 miles of highways, more than double what existed in 2001, and second now only in absolute terms to the U.S.
* Between 1952 and 1997, the length of railroads, motor roads and airline routes increased 2.5-, 10-, and 10.8-fold respectively.
* China plans to spend US$ 17.4 billion constructing airports in the next 5 years and predicts that its fleet of aircraft will rise from 863 today to 1580 by 2010 and 4000 by 2020.
* Every 20 cars added to China’s automobile fleet requires the paving of an estimated 0.4 hectares of land for parking lots, streets and highways…the 2 million new cars sold in 2003 meant paving over an area equal to 100,000 football fields.
* Exhaust emissions from cars now account for 80% of total air pollution, taking over from pollution from coal-fired power stations and boilers.
* China will be the largest media market in the world by 2010; it is already the largest TV market (400 million sets) and the largest mobile phone market (440 million users).
* Freedom House rates China as having a “Not Free” environment for media due to party monitoring of news content, legal restrictions on journalists, and financial incentives for self-censorship.
* China in 2004 had 241 telephones per 1,000 people.
* Following a 50% jump in 2007, there are now an estimated 210 million internet users in China, equal to the number in the U.S.
* A quarter of China’s internet users are now regularly engaged in online shopping, 50 % more than the year before.
* An international group of academics in 2005 concluded that China “has the most extensive and effective legal and technological systems for internet censorship and surveillance in the world.”

**8.** **Urbanization:**

* China is the 4th largest country in land area, after Russia, Canada and the U.S.
* Of the 20 most polluted cities in the world, 16 are in China according to the World Bank.
* 45 cities in China already have more than 1 million residents.
* In 1950, the urban population represented less than 13% of the total population; today the figure is 40%; it is expected to reach 60% by 2030.
* As China’s urban centers boom they are gobbling up farmland at a voracious pace: a total of 16 million acres of farmland have gone to urbanization in the past 20 years.
* In the past two decades, around 200 million Chinese have moved from the countryside to towns and cities; a staggering additional 600 million are expected to do so by 2050.
* Over the next 10 years an estimated 150 million farmers will move to cities looking for work.
* China’s urban population will reach 1.12 billion by 2050.
* 90% of the raw sewage produced in Chinese cities each year is dumped straight into rivers and lakes; 10,000 wastewater treatment plants, costing US$ 48 billion, would be needed to achieve a 50% treatment rate.
* Groundwater is now contaminated in about 90% of China’s cities.
* From 1953 to 2003, while China’s total population “only” doubled, the percentage of its population that is urban tripled.
* Some 400 of China’s largest cities are short of water and the incidence of rationing is growing; some 550 cities are expected to be water short by 2020.
* People in only a third of 340 monitored cities breathe air that meets national air quality standards, which are below WHO norms; only 1% of China’s city-dwellers breathe air considered safe by the European Union.
* About 50 cities in China report sinking ground (subsidence) due to groundwater overuse; Shanghai, for example, has dropped 2 meters since 1990.
* Everyday, 1000 new cars and 500 used ones are sold in Beijing; congestion is growing exponentially.
* China has designated 10 “model environmental cities” and master planning for these is proceeding very dynamically.

**9.** **Health and Education:**

* Average life expectancy in China increased from 35 years in 1949 to 72.58 in 2006 (male: 70.89 years; female: 74.46 years).
* Indoor air pollution from coal burning takes more than 700,000 lives a year and respiratory diseases cause nearly a quarter of all deaths in the countryside; cancer is now the leading cause of death in China.
* About US$ 54 billion of health costs (8% of China’s GNP) are attributed to air pollution in general.
* The UN estimates 1.5 to 2 million Chinese citizens to be infected by the AIDS virus; it projects that China may have 10 to 15 million HIV cases by 2010.
* Some 56% of the world’s female suicides occur in China, about 500 per day on average, often by swallowing pesticide.
* China is home to the most smokers (320 million of them, one quarter of the world’s total).
* Out of 191 countries, the World Health Organization ranks China at 144 on the quality of its public health system.
* In 2002, 16.7% of school-age boys and 9.6% of school-age girls were obese in China; an estimated 5% of GNP is going for the costs of poor diet, inactivity, and obesity.
* Severe acute respiratory syndrome (SARS), a worldwide health threat, hit China alarmingly in March 2003.
* The infant mortality rate in China in 2006 was 23 deaths per 1000 live births.
* Government spending on healthcare has been declining dramatically over the past 20 years (down by 50%).
* Official estimates of the adult illiteracy rate suggest it fell from 37% in 1978 to less than 5% in 2002; unofficial estimates place the adult literacy rate today at 87.3% (male: 93.7%, female: 80.6%).
* The average Chinese adult has just 6 years of schooling, the second lowest figure for all countries in the world.
* With 20% of the world’s population, China accounts for only 1% of the world’s outlays on education.
* China is currently training some 442,000 new undergraduates in engineering a year; the figure in the U.S. is 70,000 students.

**10.** **Politics:**

* According to Human Rights Watch in 2006, China “remains a one-party state that does not hold national elections, has no independent judiciary, leads the world in executions, aggressively censors the Internet, bans trade unions, and represses minorities such as Tibetans, Uighurs, and Mongolians.”
* According to Freedom House in 2007, “the growing economic inequality between the coastal regions and the interior, rife unemployment among former state employees, and land disputes related to industrial development in rural China have led to political instability.”
* China has executed more people than any other country in the world, carrying out more than three-fourths of them; it also has the second largest number of prisoners.
* According to Freedom House in 2006, “religious groups, minorities and people with HIV/AIDS face severe discrimination in mainstream society. The majority Han Chinese population (92% of the total population) has reaped an outsized share of benefits from government programs and economic growth…”
* The Carnegie Endowment reported in September 2006 that “China is confronting widespread violent and even deadly social unrest, raising Communist party alarms about national security.”
* China’s Ministry of Public Security reports that “mass disturbances” involving more than 15 people increased from 8,700 in 1993 to 84,000 in 2005 (motivated by labor grievances, taxation, land confiscation, pollution and corruption); there were 60,000 environmental conflicts in 2006.
* Since 2002, the number of complaints to the Chinese environmental authorities has increased by 30% per year.
* According to Freedom House in 2006, “despite the fact that workers lack the legal right to strike, there has been a growing wave of strikes over layoffs, dangerous working conditions, unpaid wages, benefits and unemployment stipends.”
* The Transparency International 2006 “Corruption Perceptions Index” rates China as a business environment with high levels of corruption; the World Bank recently reported that China has seriously backslid in containing corruption.
* China analyst Hu Angang estimates that in the late 1990s, the equivalent of 13.2 to 16.8% of China’s GDP was lost annually to crimes such as bribery, extortion and smuggling committed by government officials (fueling China’s rapid increase in socio-economic inequality and the public perception of social injustice).
* The Chinese Ministry of Commerce has estimated that 4,000 officials have fled overseas in recent years with roughly $50 billion in embezzled money.
* Human Rights Watch in October 2006 noted with concern “the sharp increase in official retaliation against lawyers, journalists, and rights advocates (and their families) through persistent harassment, banishment, detention, arrest and imprisonment.”
* China has the world’s largest standing army, with some 2.3 million personnel.
* China is estimated to have about 400 strategic and tactical nuclear weapons, along with stocks of fissile materials sufficient to produce a much larger nuclear arsenal.
* The Chinese government in March 2007 announced its plans to boost its military spending by 17% in 2007, the country’s biggest increase in more than a decade.

**11. 2007-2009 UPDATES:**

* The New Scientist Magazine stated 2/07 that “the problems looming are so great that only profound institutional change will spare China a series of debilitating economic, environmental, social and political crises.”
* The Economist Magazine stated 1/08 that “for all its green promises in recent years, the Communist Party has done little to build a bureaucracy with the clout to enforce environmental edicts and monitor pollution effectively.”
* Science Magazine stated 8/08 that “over the past 20 years, the total cost from environmental pollution and ecological deterioration is estimated to have been 7 to 20% of the annual gross domestic product in China.”
* China spent more than $3.6 billion dollars to clean up Beijing in preparation for the Olympic Games in August 2008, limiting the number of cars on the roads, expanding public transportation, and temporarily shutting down some industries.
* China’s leaders in 10/08 said they would adopt a rural growth policy aimed at vastly increasing the income of the country’s hundreds of millions of farmers by the year 2020; details were sketchy.
* Pan Yue, Vice Minster of the Ministry of Environment of China, stated in 12/08 that “the present global economic crisis shows that if China continues down the road of Western industrial civilization, it will come to a dead end.”
* The New York Times reported in 12/08 that “global demand for Chinese goods has slumped, unrest is on the rise in the industrial heartland, and China is scrambling for a new formula to preserve stability and ensure growth.”
* The Financial Times reported 12/08 that “the economic crisis of 2009 could pose the toughest test that the Chinese Government has faced since the student uprisings of 1989.”
* The share of Chinese GDP devoted to research and development (R&D) is growing by 10% per annum; in contrast, the European Union has a growth rate of only 0.025 per annum.
* The Chinese Government announced in 12/08 a $586 billion fiscal stimulus package to cope with the effects of the global economic downturn, 34% of it “supposedly” in green investments, mainly public transport.
* Because of the housing slump in China and the impact of the global economic slowdown on its export markets, China’s rate of growth in GDP may drop from 13% in 2007 to a predicted 6 to 8% in 2009.
* The U.S. State Department in 2/09 reported that China’s human rights record had worsened in 2008 and that violations rose in March during protests in Tibetan regions and in August at the Beijing Olympics.
* Due to the collapse of China’s export engine, the Government estimates that 20 of the 130 million rural migrant workers have lost their jobs so far and returned to their home villages; rural net incomes per household dropped by 20% from 2007 through 2008.
* Chinese exports plunged by a record 25.7% in February 2009 as the country felt the full force of a collapse in global demand for manufactured goods.
* Wen Jiabao, China’s Prime Minister, said in 3/09 that he was “worried” about China’s holdings of $ 1 trillion in investments in America’s government debt, the world’s largest holding, and urged the Obama Administration to offer assurances that the securities would maintain their values.