THE STATE OF CHINA'S CITIES 2010/2011

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Better City, Better Life

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UN-HABITAT
FOR A BETTER URBAN FUTURE

FOREIGN LANGUAGES PRESS

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Better City, Better Life

国际欧亚科学院中国科学中心
The China Science Center of International Eurasian Academy of Seiences

中国市长协会
China Association of Mayors

UN HABITAT
FOR A BETTER URBAN FUTURE

FOREIGN LANGUAGES PRESS

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Jiang Zhenghua

Chairman of the China Science Center of International Eurasian Academy of Sciences

Academician of the International Eurasian Academy of Sciences

Former Vice - Chairman of the Standing Committee of the National People's Congress of China

Under the careful organization of the China Science Center of International Eurasian Academy of Sciences and the China Association of Mayors, and with the strong support of the UN-Habitat, *The State of China's Cities (2010/2011)* meets with readers.

While UN-Habitat has compiled and published five editions of State of the Worl's Cities so far, we have prepared *The State of China's Cities (2010/2011)* for the first time to introduce the urban development in China to the world in English. The theme of the report accords with the theme of the Shanghai World Expo 2010 and the World Habitat Day, i.e. "Better City, Better Life". Since it is our first report on the state of cities in China, there is need not only to present the latest development, but also recall the achievements of urban development in last six decades since the founding of New China. This report will serve as a platform to describe the urban development of China for the information of other countries around the world. The various data and analysis contained in the report aims at sharing the experiences and lessons in urban development and promoting our knowledge and understanding about the construction of livable cities so as to seek a better and more harmonious future of China.

Therefore, I would like to strongly recommend *The State of China's Cities (2010/2011)* to readers around the world, to the decision-makers and mayors of cities, to various mass organizations and to all friends concerning the development of China.

September, 2010

Jiang Weixin

Minister of Housing and Urban-Rural Development, China
Executive President of China Association of Mayors

China is a populous developing country. The urbanization has provided a unique historical opportunity for rapid and sustained development of the Chinese economy and played a positive role in structure adjustment, employment promotion and coordination of the regional development and the development between urban and rural areas. At the same time, it has brought great challenges for the protection of resources and environment. Promoting the urbanization with Chinese characteristics and the healthy development of cities will not only contribute to the sustainable development and modernization of China, but also to the peace, stability and development of the world. The Chinese government, with its consistent and unremitting efforts, is committed to promote the urbanization and guide the healthy urban development on an active yet prudent basis.

Shanghai World Expo 2010, with a theme of "Better City, Better Life", has successfully demonstrated the multi-culture integration of modern cities and enormous opportunities brought by the economic prosperity and development of science and technology. The Expo has also enabled our friends from the world to learn about the rapid development of the Chinese cities and the consequent dramatic change of life of the Chinese people.

On the occasion of the World Habitat Day to be held Shanghai and at the Expo, China Association of Mayors, China Science Center of International Eurasian Academy of Science and UN-HABITAT will jointly launch the English version of *the State of Chinese Cities (2010/2011)* with the very theme of the Expo 2010. This Report, through review of the urbanization of China in the last 60 years, gives a brief but comprehensive introduction to such areas as urban housing, environment and infrastructures, social development and urban service, and urban planning and management. I sincerely hope that the Report will serve as a window, through which the outside world will understand more about the cities in China. I also hope that it will facilitate the communication, cooperation, and experience sharing between the city administrators, urban planners and specialists and scholars in China and other countries of the world.

September 6, 2010

Anna Tibaijuka

UN Under-Secretary-General and Executive Director
United Nations Human Settlements Programme

Cities are the greatest legacy of humanity and the greatest achievement of our civilization. Around the world and through the centuries cities have endured and survived wars, famine, natural disasters, epidemics, crumbling empires, and the disappearance of the gods, kings and queens for whom they were built.

The sustainability of Cities is therefore a challenge we must meet. We have to keep improving our cities, and doing that means making our cities better for those who live in them and for those yet to be born in a world whose future is predominantly urban. Today half of humanity lives in towns and cities, and the trends show that this figure will increase to two-thirds within the next two generations. We are an urban species, and there is no prospect for reversal of this reality.

This is why the theme chosen for World Habitat Day 2010, Better city, better life is as visionary as it is important for all of us to realize. To that end, I would add the term smarter city, for it is only a smart city that can provide its citizens with a better life in our planet's new urban era, into which we are entering with many unknowns, compounded by the global impact of climate change. We are forced to adjust not only by being smart ourselves but also by nurturing and growing smarter cities through five strategic steps, including:

1. Improve the quality of life, especially for the estimated 1 billion people living in slums and other sub-standard housing around the world. Improved access to safe and healthy shelter, secure tenure, basic services and social amenities such as health and education are essential to a better life for every individual.

2. Invest in human capital. This is a condition for socio-economic development and a more equitable distribution of the urban advantage in a sustainable and peaceful manner. An enlightened and educated urban population will also enable cities and regions to implement policies more effectively and to ensure that they are properly adjusted to local needs.

3. Foster sustained economic opportunities. Cities can stimulate sustained economic growth for the poor through labour-intensive projects. These include primarily public works and the construction industry. Cities in the developing world are starting to provide social security to give better access to economic opportunities for those traditionally excluded. Through economic empowerment, the newly arrived migrant and the urban poor become a resource and an asset to draw upon, rather than a burden.

4. Enhance political inclusion. Today, more and more municipal and national authorities share the same basic philosophy: bringing government within the reach of ordinary people through enhanced mutual engagement. This means engaging people and their neighbourhoods in dialogue and participation in decision-making as a fundamental aspect of local democracy. A harmonious city is one where all feel included, part of the team, playing their part for the betterment of everyone.

5. Promote cultural inclusion. Culture has historically been left out of the conventional international development agenda. More and more local development policies take into account the cultural dimensions of urban life, such as social capital, tradition, symbols, a sense of belonging and pride of place. This helps integrate ethnic minorities, preserve regional values, safeguard linguistic and religious diversity, resolve conflicts and protect the heritage. Cultural dialogues enhance social stability and understanding, contributing invaluably to sustainable development.

On the basis of the foregoing principles, I am very pleased to introduce the first State of China's Cities, a joint effort between UN-HABITAT, China Science Center of International Eurasian Academy of Sciences and China Association of Mayors. This report, covering all these five areas of strategic importance, aims to make easy access of international readers to the information about policies and practices that have engendered smart urbanization of China in the past 60 years. It also provides the experiences, lessons and challenges faced by China in sustaining its urban development in the context of rapid industrialization and urbanization within a globalizing world.

August, 2010

Wang Guangtao

Executive Vice Chairman of the China Science Center of International Eurasian Academy of Sciences

Academician of International Eurasian Academy of Sciences

Member of the Standing Committee and Chairman of the Environment Protection and Resources Conservation Committee of National People's Congress

Former Minister of the Ministry of Construction, China

The China Science Center of International Eurasian Academy of Sciences and the China Association of Mayors have cooperated, compiled and published *Annual Report on Urban Development of China* for five consecutive years since 2005. The Report is a comprehensive Chinese literature systematically reflects the trend of urban development and the policy orientation in China, and has had widespread and important impact in China. Coincidentally, UN-Habitat has also compiled and published five editions of *State of the World's Cities* so far.

At present, China is facing many opportunities and challenges in its process of rapid urbanization, which has become a focus of world intension. Therefore, China needs to strengthen the exchange and cooperation with the international community. With the strong support of UN-HABITAT, we jointly compiled and published The *State of China's Cities (2010/2011)*, which for the first time systematically introduces the state of China's cities to foreign countries, disseminates the urban culture of China, helps the international community to understand China more objectively and comprehensively. This Report will have a far-reaching and important meaning for promoting the harmonious development of the world.

Here, I would like to express my heartfelt thanks to Mrs. Anna K. Tibaijuka, Under-Secretary General of the United Nations and Executive Director of UN-Habitat, who has made special contributions to this report, as well to the human settlements development in China.

September 2010

Wu Liangyong
Professor of Tsinghua University
Academician of Chinese Academy of Sciences
Academician of Chinese Academy of Engineering

China's urbanization takes less than one hundred years to pass a road which is completed by industrial countries for two or three hundred years. But it is also facing all kinds of common problems existed in the urban and rural environment worldwide. The economic and social changes of China in the past 30 years are remarkable, including the transformation of planned economy to socialist market economy, great migration of rural population to cities and towns, and profound change of the mechanism for urban and rural development. In the process of accelerated urbanization, there are various problems that have occurred along with development.

Wise men with great insight have recognized that unlimited industrial development is inappropriate, and that there it is imperative to promote a conservation culture. Human being shall evolve and coexist with the earth. The concept of "People-oriented" and "living and working in peace and security" is the precious tradition of China, which is the core principle for urban development and the basic standpoint for the science of human settlements.

Compared with the western society, the urbanization in China is rapid in speed and massive in scale, while the understanding of urban challenges and technical research is lagging behind. Therefore, we should explore alternative paths for the development of Chinese cities on the basis of the experiences and lessons of the West.

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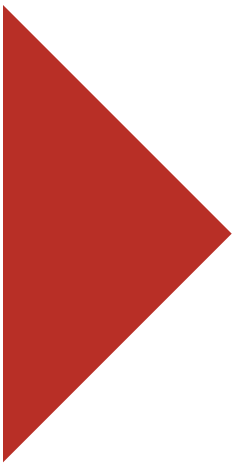

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Executive Summary

China is a country with 5,000-year-long civilization and a long and rich history. The compass, gunpowder, art of paper-making and block printing invented in China have made great contributions to the progress of mankind. The Great Wall, Grand Canal and other projects built by the Chinese people are engineering feats in the world.

The history of Chinese cities can be traced back to Longshan Culture in the Yellow River Valley about 4,000 years ago. The records written in words started in the Shang Dynasty (16th-11th century BC). China, a farming society for more than 3, 000 years, began to decline to become a semi-colonial and semi-feudal society from the Opium War in 1840. In the Revolution of 1911, the Chinese people put an end to the feudal and monarchic rule what lasted for more than 2,000 years in China. On October 1, 1949, Chairman Mao Zedong declared solemnly to the world the founding of the People's Republic of China in Beijing. This was the new starting point for the great revitalization of the Chinese nation.

1. Urbanization and National Economic Development

In 1949, China had a total of 132 cities, with an urbanization level of 10.65%, and with a total of 57.67 million population of the whole country living in cities and towns. The 1950s witnessed the first wave of urban development in China.

In 1978, the focus of the Chinese government began to be shifted to the economic construction. As a series of policies and measures were introduced to conduct economic reform and opening up China to the outside world, the national economy and urbanization developed at high speed. The distribution of cities and their spatial structure became more national. Cities took on a new with each passing day. Great improvement was made in the field of human settlements.

Up to the end of 2009, there were 654 cities in China. With an urbanization rate of 46.59%, there were 621.86 million people living in cities and towns. According to administrative divisions, there were 287 cities at and above the prefecture level, 367 cities at county-level, and 19,322 towns.

With the gradual increase of urbanization level, the position and role of urban economy are becoming more important in the national economic development. Today, urbanization has already become an important force to encourage the new-type industrialization, create jobs and expand domestic demand. It has promoted the economic development, social progress, cultural prosperity, and comprehensive strength of China.

In 2009, the Gross Domestic Product (GDP) of China was 34050.7 billion Yuan, and the per capita GDP 25,511 Yuan (US$3,735). At the end of 2009, the number of employed people was 779.95 million, of which 311.20 million worked in cities and towns. The unemployment rate registered in cities and towns was 4.3%. On the basis of the booming development of urban economy, people's livelihood was improved gradually. The consumption market was prosperous. The living standards of the people were obviously improved. The social environment was stable and harmonious. In 2009, the per capita disposable income of residents in cities and towns reached 17,175 Yuan (US$2, 515).

2. Regional and Spatial Distribution of Cities and Towns

China has formed an urban system in which large and medium-sized cities develop harmoniously with small towns, with the spatial structure becoming rational. The urban system mainly includes three metropolitan areas with densely distributed cities and towns, such as the Yangtze River Delta, the Pearl River Delta, and the Beijing-Tianjin-Hebei region, and urban clusters in the mid south of Liaoning Province, the Central Plains of Henan Province, Wuhan of Hubei Province, Changsha-Zhuzhou-Xiangtan of Hunan Province, Chengdu-Chongqing, the Southeast of Fujian Province, the Shandong Peninsular, Guanzhong-Tianshui, and the Beibu Gulf.

These metropolitan areas and urban clusters, with one or multiple cities being the nucleus, have become important economic growth poles in these regions, and have played important roles in leading the regional and urban and rural development. They have in essence broken the constraint of administrative divisions, realized the integration and consolidation of social and economic activities within vast areas, greatly reduced the distance and space between people, and promoted the human movement and economic activities at the regional and national levels. The trans-regional industrial groups, financial networks and trading institutions have developed at a rate and scale unparalleled in the history.

All these have made it possible for capitals, technologies and information to flow and spread more smoothly around the country, and for metropolitan areas and urban clusters to become pivots to promote the regional economic development of China.

3. Urban Housing Development and Reform

In China, common commodity housing is the main part of the urban housing supply system. The social housing is provided for low-income families who have difficulties in affording a commodity house. Proper financial aids are given to medium income and near-low-income families who have difficulties in affording a commodity house. The types of the current social housing include: low-rent houses, public rental houses, affordable houses, and inclusive policy houses.

In 2008, the per capita living space was 23 square meters for urban residents (with per capita floor space approaching 30 square meters). The housing quality and living environment were also greatly improved. The supporting infrastructures and public service facilities were improved. The quantity of houses with independent kitchens and toilets accounted for over 80% of the total. The great importance was attached to building energy saving, environmental improvement and property service. The housing system reform enabled the construction of housing in cities and towns to become an important economic growth point and consumption hotspot. The rate of urban housing ownership was 87.8% in 2008.

Currently, there are some in-depth contradictions and problems for urban housing in China. The housing supply and demand contradiction is outstanding. The price of housing in some cities is too high and the price of housing is soaring too fast. The difference in housing ownership is outstanding, and real estate development behavior is improper, just to name a few. The housing shortage problem is especially outstanding for some medium and low-income families and large groups of "new residents in cities and towns". There are still more than 10 million urban families living in various types of state-owned shanty areas in cities, industrial district and mining areas. Most of these houses have simple structures, incomplete facilities, and remain in bad conditions for many years. Dilapidated houses account for a high proportion in these shanty areas, with hidden safety risks. The infrastructure is also very incomplete in these areas. The housing system, with government support and multiple financing and development channels, is still under development.

4. Urban Environment and Infrastructure

With the increase of urbanization rate and expansion of city scales, the carrying capacity of urban infrastructures has been greatly improved in such aspects as: water supply and drainage, sewage treatment and water saving, gas and central heating supply, road facilities and public transport services, sanitation and garbage collection and disposal, as well as parks, open space and greeneries. All these have provided strong support for the development of urban economy and the improvement of people's living standards. The quality and environment of human settlement have been remarkably improved in China. There are 19 Chinese winners of the UN Habitat Scroll of Honor.

In saving energy in urban areas and coping with global climate change, the Chinese Government has released a series of polices and regulations to facilitate energy-saving and emission reduction. It is stipulated that by 2020, China's carbon dioxide emissions per unit GDP will have been reduced by 40% to 45% from that in 2005; and the non-fossil energy consumption will have reached 15% of the total primary energy consumption. The extensive international cooperation and exchange will be carried out with international organizations such as the United Nations, World Bank, Asian Development Bank and with many countries, so as to share the experiences, technologies and capitals in a complementary way and to increase the capacity and level of energy saving and emission reduction in cities.

5. Floating Population and Rural Migrant Workers

From 1979 to 2009, China's floating population increased from the 6 million to 211 million, constituting the largest population move and migration in its history. In the upcoming 20 to 30 years, the floating population is expected to remain over 200 million, posing a serious challenge to the national strategic planning, government's social administration and public services. Therefore, the orderly flow and reasonable distribution of the migrants is of great significance for promoting the sound urbanization and the all-round, coordinated and sustainable development of the economic and social sectors in China.

Rural migrant workers are a new type of workforce that has emerged in the progress of China's reform and opening-up, as well as in the process of industrialization and urbanization. In 2009, the total number of rural migrant workers was 230 million. The number of rural migrant workers who left their hometowns to work in cities and towns was 150 million, of which 61.6% were the new generation of rural migrant workers at the age from 16 to 30. Rural migrant workers are the products of influences by a range of factors in China's dual economic and social structures between the urban and rural areas. In order to enable the rural migrant workers to work and live stably in cities where they are working, the central and local governments in China are building three social security system for them. The first is the pension and medical insurance to eliminate their worry behind the time when they old and ill. The second is the unemployment insurance to overcome their temporary living difficulties when they lose their jobs. The third is minimum substance guarantee which is the last resort to save them from falling into dire poverty.

6. Medical and Health Insurance System

Over the past ten years and more, governments at different levels have been positively pushing on the reform of basic medical insurance system. The national reform of urban employees' basic medical insurance system was launched at the end of 1998, which changed the public health care system into a social medial insurance system. The urban medical aid system was established in 2005, which granted aid to the people who receive minimum subsistence allowance or have other difficulties. The trial of basic medical insurance for urban residents started in 2007, which included students, children and the elderly and other non-employed persons into the coverage of the medical insurance. The medical insurance system for urban residents was implemented nationwide in 2009.

The framework of medical security system with the Chinese characteristics has been formed basically through the reform and research in many years. The urban employees basic medical insurance, the urban residents basic medical insurance and the new-type rural cooperation medical service have covered the urban employed and non-employed people, rural people, and the people with difficulties in urban and rural areas. They are the major components of the medical security system in China. The basic medical insurance system is the main player of the medical security system. Meanwhile, the urban and rural medical aid and social charity donation and other relevant systems provide aid to the poor people for their participation in the insurance and for their payment of the personal contributions, creating a possibility of minimum social secure. The higher and variety of medical demands of the people are satisfied through the supplementary medical insurance and commercial health insurance.

7. Education Development

The education of new China was developed on an almost scratch basis. In 1949, 80% of the population in China was illiterate, and only 20% and 6% of the population entered primary school and secondary schools respectively. There were only 117,000 students studying at universities. Through the unremitting efforts in the past 60 years, especially with the reform and opening-up policy implemented in the last thirty years, the education in China has undergone enormous changes, and made remarkable historic achievements.

In 2009, the net enrollment rate for primary schools in China reached 99.4%. The gross enrollment rate for junior middle school reached 99.0%. The illiteracy rate of young adults went down below 3.58%. The number of the students studying in various types of universities and colleges in China was 29.79 million, with a gross enrollment rate of 24.2%.

To enable everyone to have equitable access to education is a fundamental right of citizens granted by the Constitution and is the relentless pursuit for the education in China. Great achievements have been made in the implementation of the policies to progressively introduce the compulsory education in urban and rural areas, establish and improve the financial assistance system for the students from poor families, grant preferential policies to rural areas, especially the poverty-stricken areas and ethnic areas, support the development of special education, protect the right to receive compulsory education for girls and the children of migrant workers, and build the modern remote education network in primary and secondary schools to share the high-quality resources. These policies have helped the urban and rural children, teenagers and the people to enjoy more equal education opportunities and more high-quality educational resources.

8. Community Service and Development

Community is the basic unit of society where people live and meet. The community harmony is the foundation of harmony for a society as whole. The urban communities are the places where the social management should be focused, the livelihood of people improved, and social stability maintained. With the further development of industrialization, information technology, urbanization, marketization and internationalization, China is facing profound changes in social structure and pattern of interests and ideas. To construct harmonious communities has important practical significance and far-reaching historical significance for protecting the basic living rights of urban and rural poor people, satisfying the diversified material, cultural and living needs of the ordinary residents, inspiring enthusiasm, initiative and creativity of the public to participate in social development, and creating a more favorable social environment for the social and economic development.

At the end of 2009, there were altogether 175,000 various community service centers in China, of which, there were 10,003 integrated community service centers, 53,000 neighborhood service centers, and 112,000 other community service facilities. There were 693,000 city convenience and service points, and 289,000 volunteer community service organizations.

9. Social Assistance and Charity

Social aid is a kind of social security system in which the state and the society provide aids of all kinds, according to the stipulations of policies and laws, to those who fall into a predicament in respect of basic material life and cannot maintain the minimum living standard by themselves due to various reasons.

At the end of 2009, there were a total of 11.411 million families, 23.456 million persons who received basic living allowances in cities in China. The average standard for basic substance allowances was 227.75 Yuan in cities, and the average monthly basic substance allowances standard was 172 per capita in cities.

With the effort of urban and rural governments and all circles of society, a charity system with philanthropic culture, philanthropic organizations, philanthropic policy, and philanthropic donations being its basic framework, and with the support of governments, the sponsorship of the society and the participation of the public, has been initially formed. It has played a more and more important role in supporting the aged, disabled, orphans, relieving difficulties, helping needy students in their studies, and assisting to pay for medical services.

In 2008, after the Wenchuan massive earthquake on May 12 in the west of China, the money and materials donated for earthquake resistance and disaster relief received in the country and from overseas totaled the value of 76.7 billion Yuan. After a 7.1-grade- Richter earthquake occurred on April 14, 2009, in Yushu, Qinghai Province, the social donation reached more than 10 billion Yuan.

10. Urban Planning and Administration

Urban planning is an affair jointly administered by the central government and local governments in China. In the process of fast urbanization, urban planning plays an important role, and serves not only as an important policy tool to promote the growth of local economy and guide the urban development and construction, but also an important approach for the central government to implement the macroeconomic control. The success of the cities in China manifests the success of urban planning in China.

In 1984, “The City Planning Ordinance", China’s first urban planning regulation, was promulgated and enacted, creating a legal framework for the implementation of urban planning and management and a fundamental change of the absence of guidance for urban planning. In 1989, the Standing Committee of the National People’s Congress of China adopted the City Planning Act of China, which entirely sets out the guidelines for urban development, basic principles for urban planning, and schemes for the formulation and implementation of urban planning and legal liabilities, etc. In 2007, The Urban and Rural Planning Act of the People’s Republic of China was promulgated and implemented. This Act has clearly specified the urban planning functions of the central government and local governments, which include these aspects of compilation, implementation and supervision.

11. Challenges and Opportunities

The population living in cities and towns in China will outnumber the population living in rural areas in the next five years. In 2030, the urbanization rate will reach about 65%. There will be a newly increased population of 300 million living in various types of cities and towns. The rapid urbanization will provide a strong and sustaining power for expanding the consumption and investment demands. At the same time, it also brings unprecedented challenges for energy saving, environmental improvement and increase of the quality and level of urban development.

For the sustained urban development in the next 20 years with the Chinese characteristics, objectives and strategies have been set to promote the coordinated development of big, medium-sized and small cities and small towns, strive to improve the overall carrying capacity of cities and towns, bring into full play the radiating role of cities in leading the development of rural areas, and promote the economic development in county areas.

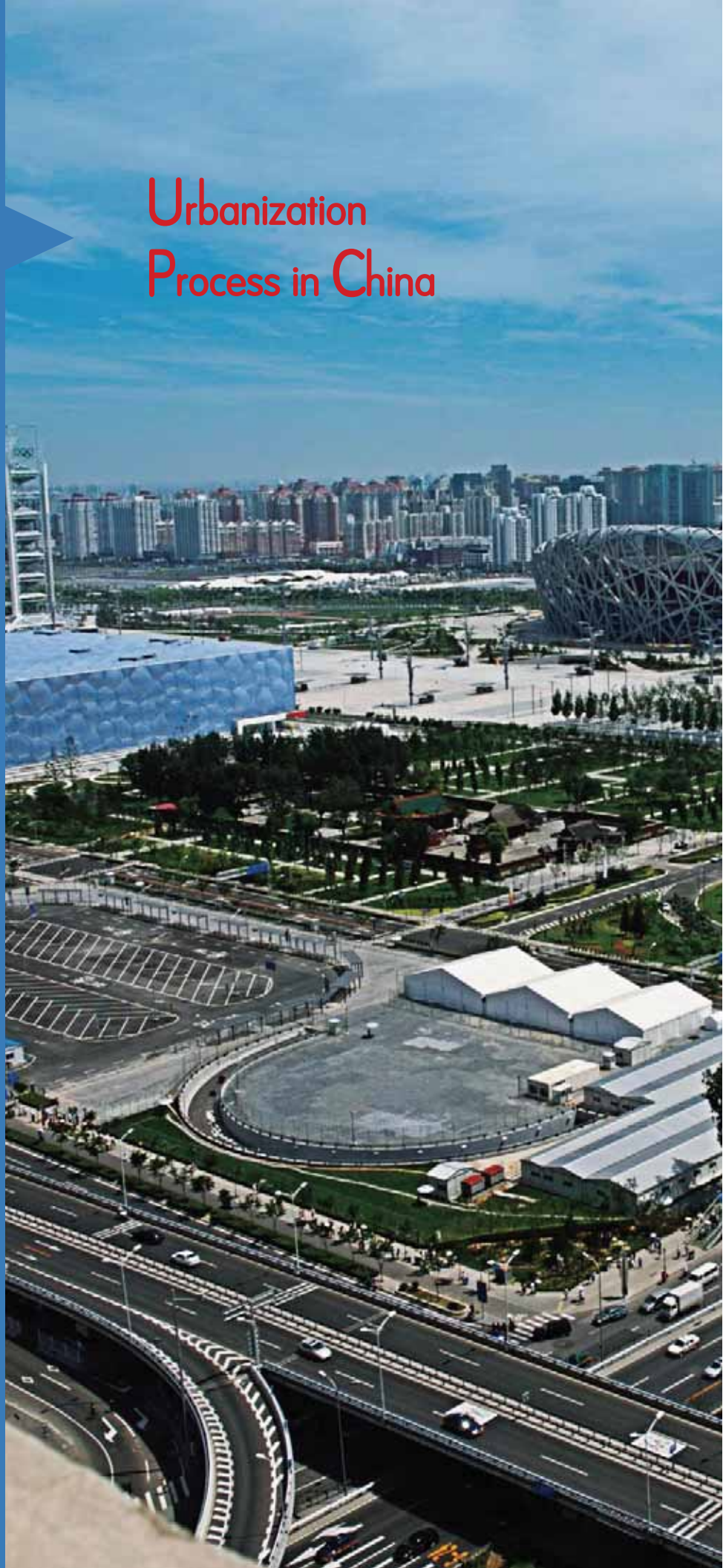
At present, the priority should be placed on facilitating the development of medium and small cities and small towns, relaxing the restriction of residential registration in cities and towns, stimulating employment, and upgrading the living standard. The priority should also be placed on improving the quality of urban planning, strengthening the construction of housing and municipal infrastructure, promoting the urban governance, and narrowing the urban-rural divide, so as to enhance the development level of urbanization in an all-round way.

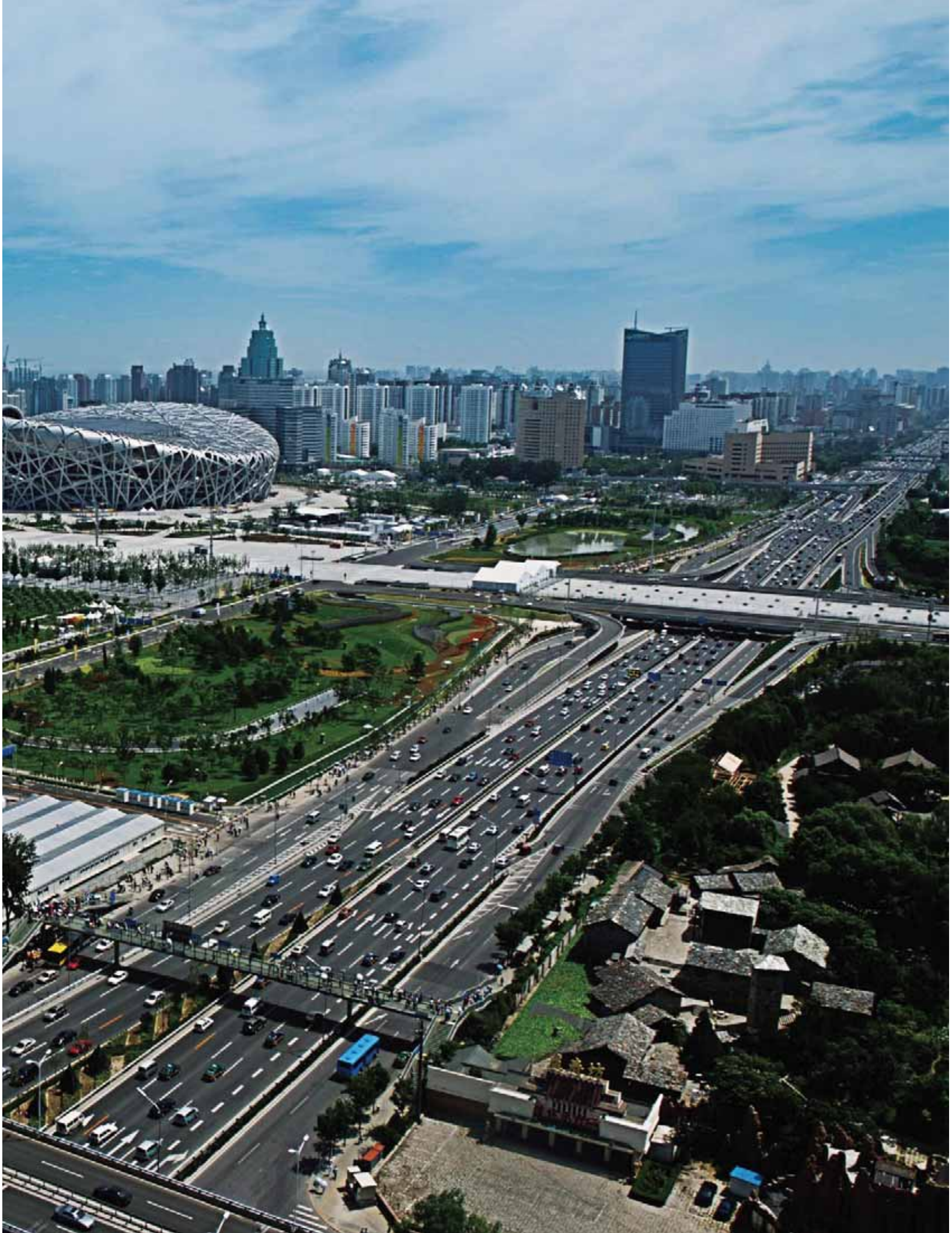
Chapter One

01

Urbanization Process in China

On October 1, 1949, Chairman Mao Zedong solemnly announced to the world in Beijing that the People's Republic of China was founded. This was a starting point for the great rejuvenation of the Chinese nation. From then on the Chinese people who had stood up began to control of their own destiny and strive to create a new era of China. In the past sixty years, the industrious and talented people of all ethic groups in China have became united and self-reliant, worked hard to overcame considerable difficulties and hardships, and made great achievements that attracted worldwide attention. Today, a socialist China stands rock-firm in the east of the world, marching towards modernization for a better future and better the world.





1 Urban Development in the Last Sixty Years

Urban and architectural cultures are immortal chapters in the splendid civilization of ancient China. The history of cities as a form of human settlements goes back to the distant primitive ages when civilizations just sprouted, yet the large-scale urban development worldwide did not take place until after the modern industrial revolution. Throughout the history of urban development, the pace of urbanization has been accelerating and cities have evolved into political, economic, cultural and social entities that are highly complex.

- Wu Liangyong
Selected Essays on Urban Planning and Design, 1988

1.1 Historic Review of Urban Development

When the new China was founded in 1949, it had 132 cities in total, representing an urbanization ratio of 10.65%, with 57.67 million population living cities and towns. With the implementation of the guidelines on the rehabilitation of the national economy which was developed by the central government in the early 1950s, urbanization and urban construction was steadily pushed forward. For instance, in the first Five-Year Plan period (1953-1957) when 156 key projects of the State were initiated, a group of industrial and mining cities emerged, such as Yuci that was focused on textile machinery and industry, Jixi, Shuangyashan, Jiaozuo, Pingdingshan and Hebi that were focused on coal industry, Ma'anshan that was focused on iron and steel industry, and Yumenn that was focused on petroleum industry. At the same time, coastal cities like Tianjin, Shanghai and Guangzhou were upgraded. Industry-dominated cities like Wuhan, Chengdu, TaiYuan, Xi'an, Luoyang and Lanzhou were expanded. Medium-sized cities like Anshan, Benxi, and Qiqihar and big cities like Harbin, Changchun and Shenyang were developed. And in Beijing, the capital of new China, the first high wave of planning and construction was set off.

As a result of the economic fluctuations in late the 1950s and the subsequent natural disasters and the Cultural Revolution beginning in 1966, the national economy lingered over a long period of time and consequently the progress towards urbanization was greatly hindered. From 1966 to 1978, only 26 new cities were established. The country had an urban population of 172.45 million in 1978, representing an urbanization ratio of 17.92%.

Following 1978, the government started to shift the focus of its work onto economic development. As a series of policies and measures were introduced to conduct economic reform and open up China to the world, the national economy grew at high speed, the urbanization progress was significantly accelerated, the urban layout and space structure became more rational. Cities played an increasingly important role in the national economy. The urban landscape changed with each passing day, and urban living environment was greatly improved. From the 1980s reform in economic structure took place successively in cities. Especially from the 1990s, urbanization development was at high speed thanks to the adoption of the strategy on developing small and medium-sized towns and cities, establishment of economic development zones across the country and the boom of township enterprises. Urban economies had stronger radiation effects and cities played a better role as regional growth centers. The long-standing separation of urban and rural areas was eliminated.

In 1992 the Fourteenth Congress of the Communist Party established the overall objectives and basic frameworks for the system of socialist market economy. The status and role of cities as regional centers in economic and social development were recognized and valued to an extent that was unparalleled in the history of new China. In 2002, the Sixteenth Party Congress explicitly proposed that "we should gradually increase the level of urbanization, persist in balanced development of big, medium-sized and small cities and small towns and follow our own path towards urbanization". Since then China's urban construction and development entered into a new phase.

At the end of 2009, among all provinces, autonomous regions and municipalities of China (excluding Hong Kong SAR, Macao SAR and Taiwan Province), there was a total of 654 cities, representing an urbanization ratio of 46.59%. The total urban population was 621.86 million. In the past three decades when economic reform and opening up policy was carried out, the number of cities in China as increased in three phases: First, the phase of modest growth between 1978 and 1982, during which the number of cities rose from 193 in 1978 to 245 in 1982, with an average annual increase of 13; secondly, the phase of rapid growth between1983 and 1996, with a total of 666 cities in 1996 across the country, representing an average annual increase of 30 during the period; Thirdly, the phase of slight adjustment between 1997 and 2009, with a total of 668 cities in 1997 and 654 in 2009.

The decrease in the number of cities in this period was mainly attributed to the fact that cities on the county level were replaced by districts, which was a result of adjustments of administrative divisions for the economic development in scale.

According to the administrative divisions, at the end of 2009 there were 287 cities at the prefecture level or above (including 4 municipalities under the direct administration of the central government and 15 sub-provincial cities), and 368 cities on the county level. There was a total of 34,170 township-level administrative jurisdictions, including 14,848 townships, 19,322 towns and 6,686 urban neighborhoods. According to statistics of non-agricultural population in urban districts, there were 23 cities in China with a population of 2 million or more, 33 cities with a population of 1-2 million and 86 cities with a population of 0.5-1 million, 239 cities with a population of 0.2-0.5 million, and 273 cities with a non-agricultural population of 0.2 million or less.

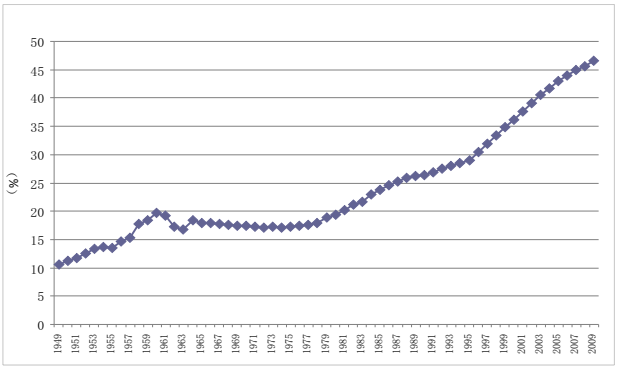


Figure 1.1 1949-2009 Level of Urbanization of China

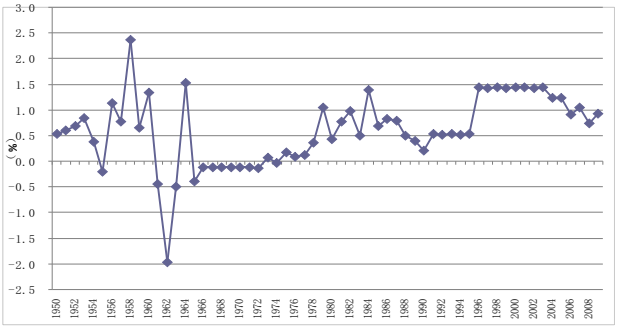


Figure 1.2 Average Annual Growth Rate of Urbanization(%),1950-2009

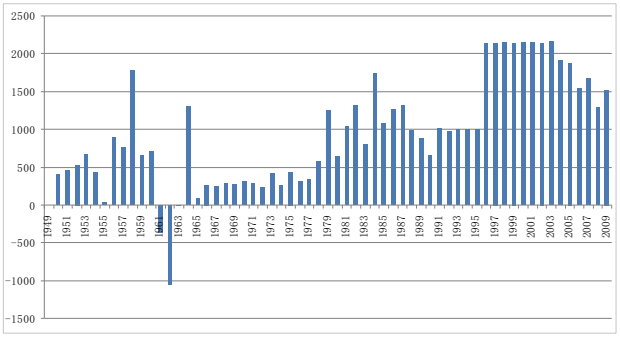
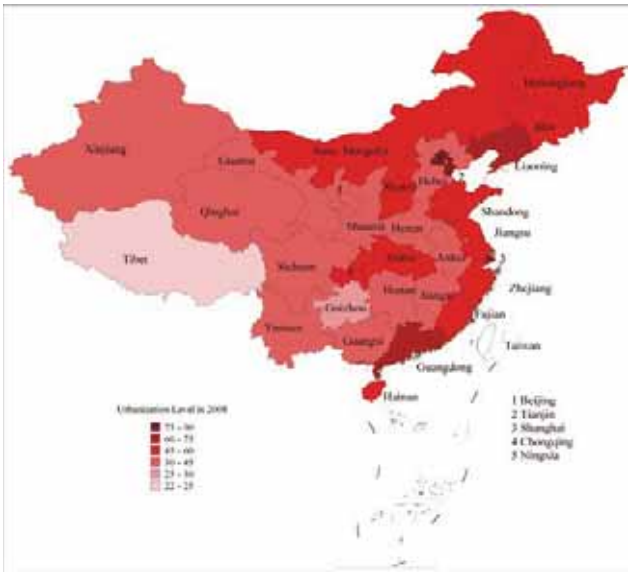
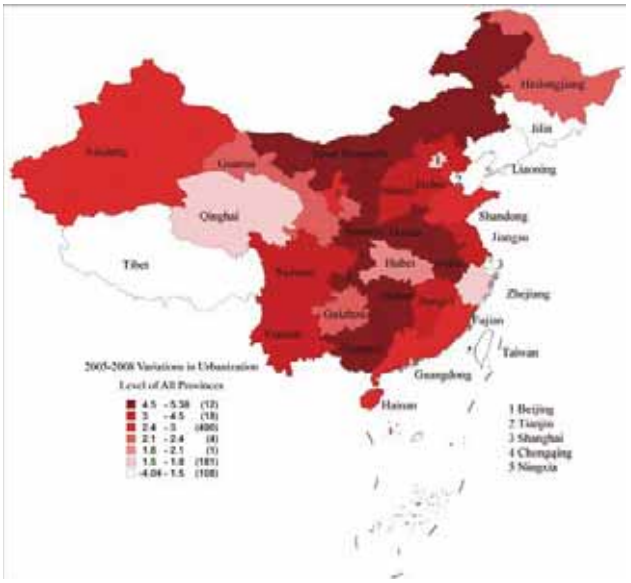


Figure 1.3 Annual increase in urban population

Map 1.1 Distribution of Cities and Towns, 2005
Source: China's Urban System Planning (2005-2020)



Map 1.2 Regional Distrubtion of China's Urbanization Level, 2008



Map 1.3 Variations in Urbanization Level of All Provinces, Municipalities and Autonomous Regions, 2005-2008

1.2 Important Role of Cities in National Economic Development

As China has gradually raised its urbanization level, urban economies have played an increasingly important role in the national economy since 1950s. According to statistics, in 2008 all cities at the prefecture level and above had a total population of 376.19 million, accounting for 28.3% of the total population of the country. The gross product of these cities accounted for 62% of the country's GDP. There were 43 cities with gross product of 100 billion RMB Yuan[1] or more, including 20 cities with gross product of 200 billion Yuan or more. These cities had a total of 1,689.27 billion Yuan of revenue attributable to the financial budget of local governments, accounting for 59% of the total local fiscal revenues across the country. Their spending within local fiscal budget totaled 2,129.67 billion Yuan, accounting for 43.4% of the total local fiscal expenditures of the country. While cities maintained a high speed in economic development, their tertiary industry, such as service sector, was also developed rapidly, and their industrial structures were optimized and upgraded.

Export-oriented economic activities of cities have developed at high speed. In 2008 the cities at the prefecture level and above had a total of 47,568 industrial enterprises with foreign investment or investment from Hong Kong, Macao or Taiwan, a 12 times increase from 1990. Their industrial output value totaled 11,086.87 billion Yuan, a 173 times increase from 1990. In 2008 the total value of imports and exports of these cities was 2,536.44 billion U.S. dollars, representing a 22 times increase over 1990 and accounting for 99% of the total value of imports and exports of the country. In 2008, 20,902 (4 times the figure of 1990) new contracts were signed for foreign-funded projects in these cities, which involved 108.7 billion U.S. dollars (16 times the figure of 1990) of foreign investment that were actually utilized.

With the acceleration of economic globalization and reform in the urban commodity circulation system, a large number of foreign business groups and multinational corporations successively set up their branches and agencies in mainland cities. Many chain stores and large supermarkets opened in cities, which greatly boosted the prosperity of the domestic and international trade market. In 2009, the total retail sales of social consumer goods were 12,534.3 billion Yuan, including 8,513.3 billion or 67.9% from cities. At the end of 2009, the balance of RMB and foreign-currency deposits of all financial institutions totaled 61.2 trillion Yuan (including 26,476.1 billion Yuan of savings of urban and rural residents) , 13.2 trillion more than that at the beginning of the year.

According to the preliminary statistics of the National Bureau of Statistics of China, In 2009 the GDP of China was 34,050.7 billion Yuan, representing a growth rate of 9.1% calculated at constant prices, to which the primary industry contributed 3,522.6 billion Yuan, representing a growth rate of 4.2%; the secondary industry contributed 15,763.9 billon Yuan, representing a growth rate of 9.9%; and the tertiary industry contributed 14,764.2 billon Yuan, representing a growth rate of 9.3%. The ratio between the primary, secondary and tertiary industries was: 10.3: 46.3: 43.4 (ratios in 2008: 10.7:47.5:41.8). In 2009 per capita GDP of China was 25,511 Yuan (US Dollar 3,735).

At the end of 2009, there was a total of 779.95 million employed people across the country, 5.15 million more than the previous year. Among all the employed people, 311.2 million people were in urban areas, 9.1 million more than the previous year. At the end of 2009, 9.21 million unemployed people were registered in urban areas, representing an unemployment rate of 4.3%, 0.1% higher than the previous year.

[1] Reference exchange rate of Renminbi of period average in 2008 was 100 US Dollars = 694.51 RMB Yuan; and in 2009 was 100 US Dollars = 683.10 RMB Yuan.

1.3 Expansion of Employment Opportunities in Cities

In the past sixty years since the founding of new China, the governments at various levels, while making efforts in developing economy, have always given priority to the issue of employment. They revised employment policies timely in view of primary demands and problems in each period and therefore boosted the continuous expansion of the country's labor force. The number of employed people across the country rose from 180.82 million in 1949 to 774.8 million in 2008, representing an increase of 328%. The number of employed people grew faster in urban areas, with 302.1 million employed people at end of 2008, 18.71 times the figure of 1949.

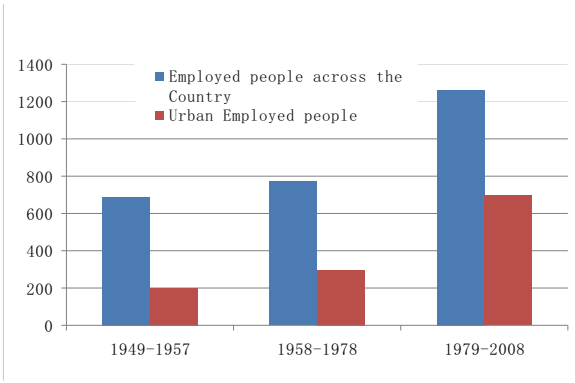


Figure 1.4 Annual Increase in Number of Employed People in Each Time Period

Since the founding of new China, the country has been pushing forward industrialization and urbanization simultaneously. The improving industrial system and large-scale urban construction has facilitated in sharp rise in the number of employees working in the second and tertiary industries. Especially after the introduction of economic reform and open-up policy, the country, in an effort to change the heavy industry biased structure, shifted the focus of development onto the light industry, commerce, catering sector, service sector and repairing and maintenance sector that are closely related to the people's life and the undeveloped transportation, post and telecommunications and financial and insurance sectors that had constrained the development of the national economy. Through persistent efforts of 30 years, the shortage of commodities that bedeviled the country for quite a long time was overcome, the quality of the people's life rapidly improved, and the "bottleneck" restraining effect of undeveloped infrastructures like energy, transportation and post and telecommunications mitigated. The industrial structure became more rational and dramatic changes occurred in the employment structure. As of 2008, among all employed people across the country, there were 306.54 million people working in the primary industry, accounting for 39.6%; 211.09 million working in the secondary industry, accounting for 27.2%; and 257.17 million working in the tertiary industry, accounting for 33. 2%. Compared with 1952, the number of people in the primary industry decreased by 43.9% and that in the secondary and tertiary industries increased by 19.8% and 24.1% respectively.

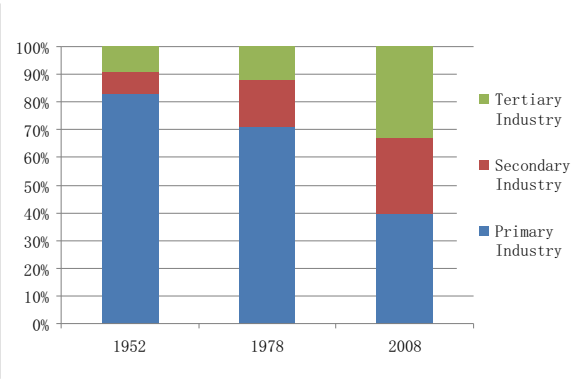


Figure 1.5 Distribution of Employees in Three Industries in each Time Period

It was clearly proposed at the Third Plenary Session of the 14th Central Committee of CPC held in November 1993 that China should develop labor force market as part of its efforts in building the system of socialist market economy. This proposal marked end of the old system and a beginning for building the new employment administrative system. In the years following 1994, the country successively enacted Labor Law, Employment Promotion Law, Employment Contract Law, Law on Mediation and Arbitration of Labor Disputes, Law on Vocational Education as well as related implementing rules. The Labor Law enacted in 1994 provides legal basis for the development of the market of labor forces. The legal status of parties to an employment relationship is recognized and the right of employers to hire employees and that of employees to choose employer in their own discretion are protected. Employment Promotion Law promulgated in 2007 provides guarantees at law for long-term implementation of effective employment promotion measures by highlighting the government's role of promoting employment and establishing the working system for employment promotion. Through enactment and operation of the Labor Law and related laws and regulations, the legal status of a market-oriented employment administrative system in which "laborers choose employers on their own and employment is regulated by the market and promoted by the government" was recognized and the enforcement of the system was guaranteed.

However, as a large country with a population of 1.3 billion today, China will continue to face considerable pressure in employment in the process towards urbanization and it has to properly deal with this issue in a long period of time. In the coming ten years which will be crucial for building an all-around well-off society, it will be of vital importance to properly address the employment issue which is of great concern to the people. The 17th Congress of CPC guided the employment-related work for years ahead by targeting higher employment rate and adopting the strategy to expand work forces. In pushing forward the progress towards urbanization, the principle of "giving priority to employment" shall be followed to give a better play to the role of the market in allocating labor resources and the role of government in promoting employment, develop and revise various employment policies, provide good employment services and make efforts to do well the employment promotion that is of vital interest to the people, so as to ensure the long-term social stability and the peace and order of the country.

1.4 Improvement of the Functions of Cities and Life of Urban Residents

On the basis of the flourishing urban economy, improvements have been made on issues of great concern to the people: a great number of jobs have been created, salary levels substantially raised and the consumer market has been booming. Rural and urban residents share the advantages brought by the economic reform and opening-up policy and their quality of life has improved significantly. As a result, the society has become more stable and harmonious.. The per capita disposable income of urban residents in 2009 was 17,175 Yuan (US Dollar 2,515), representing a 19-fold increase over in 1949 after adjusting for price changes.

From the 1980s, city dwellers started to take a variety of forms of transport. At the end of 2009, the number of automobiles owned and used by civilians across the country totaled 76.19 million, an increase of 17.8% from the previous year, of which 26.05 million were privately owned automobiles, representing an increase of 33.8% from the previous year. The number of all civilian automobiles in Beijing rose from one million in the beginning of 1997 to 3.72 million at end of 2009 (including 2.18 million privately owned automobiles). At the same time, urban transport infrastructure was further improved. The construction of road networks and development of public transport was accelerated. Modern urban transportation systems consisting of primary and secondary roads, non-motor vehicle roads, sidewalks, high-speed ring roads and bridge overpasses were built in all major cities.

Reforms in the housing system have made housing construction a new economic growth point and a new consumption field. The per capita floor space of urban residents rose from 4.3 square meters in 1949 to 23 square meters in 2008. The quality of houses and living environment were also greatly improved. The supporting infrastructures and public facilities were upgraded. The number of flats equipped with separated kitchens and bath rooms accounted for more than 80% of the residential housing stock.

Great efforts have been made to develop compulsory education and medical and health undertakings. A large number of sports, cultural and educational facilities have been built and opened to the public that satisfy the demands of urban residents on culture, study, entertainment and sports. The tourism and leisure industry has developed rapidly. There were 1.9 billion inbound tourists and 1,018.4 billion Yuan of revenue from inbound tourism, and a total of 47.66 million outbound visitors (including 42.21 million for private purposes) in 2009. Inbound and outbound tourism is switching from the mode of sightseeing to the mode of leisure and relaxing and traveling abroad is becoming affordable for the ordinary Chinese people.

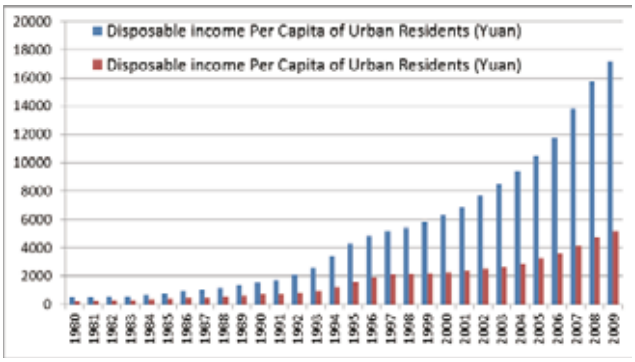


Figure 1.6 Per Capita Incomes of Urban and Rural Residents, 1980-2009

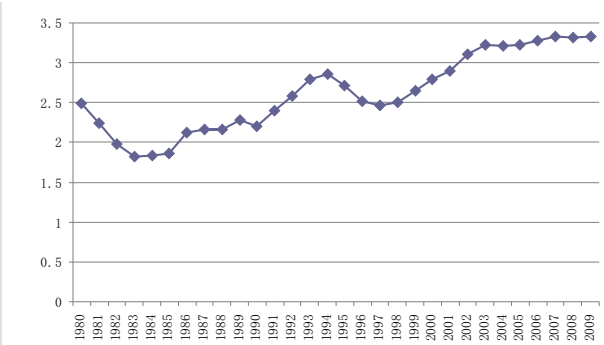


Figure1.7 Comparison of Income between Urban Residents and Rural Residents

Major Indicators of National Economy and Social Development Since 1949 Data Source: National Bureau of Statistics of China							
Indicators	Measurement Unit	Early Years of New China			2008	Increase of 2008 over early years (times)	average annual increase(%)
		1949	1950	1952			
Population							
Total Population (at end of year)	10000	54167			132802	1.5	1.5
Urban Population	10000	5765			60667	9.5	4.1
Rural Population	10000	48402			72135	0.5	0.7
Employment and Unemployment							
No. of employed persons	10000			20729	77480	2.7	2.4
# No. of staff and workers	10000			1603	11515	6.2	3.6
National Economic Accounting							
GDP	100 million Yuan			679.0	300670.0	76.8	8.1
Primary Industry	100 million Yuan			346.0	34000.0	5.6	3.4
Secondary Industry	100 million Yuan			141.8	146183.4	387.8	11.2
Tertiary Industry	100 million Yuan			191.2	120486.6	84.0	8.3
Per Capita GDP	Yuan per capita			119.4	22698.0	32.4	6.5
Finance							
National Fiscal Revenue	100 million Yuan		62.17		61316.9	985.3	12.6
National Fiscal Expenditure	100 million Yuan		68.05		62427.0	916.4	12.5
Gold Reserve	100,000 ounce			500	1929.0	2.9	2.4
Foreign Exchange Reserve	US$ 100 million			1.39	19460.3	13999.2	18.6
Balance at End of Year of Rural and Urban Residents' Savings	100 million Yuan			8.6	217885.4	25334.5	19.8
Output of Major Agricultural and Industrial Products							
Food stuff	10000 ton	11318			52870.9	3.7	2.6
Cotton	10000 ton	44.4			749.2	15.9	4.9

Vegetable Oils	10000 ton	256.4			2952.8	10.5	4.2
Raw Coal	100 million ton	0.32			27.93	86.3	7.9
Crude Oil	10000 ton	12			18973	1580.1	13.3
Power Generated	100 million kh	43			34669	805.3	12.0
Crude Steel	10000 ton	16			50092	3129.7	14.6
Cement	10000 ton	66			140000	2120.2	13.9
Total Output of Energies	10000 ton of standard coal	2374			260000	108.5	8.3
Total Consumption of Energies	10000 ton of standard coal	5411			285000	51.7	6.9
Transportation and Post %Telecom							
Length of Railroad lines in service	10000 km	2.18			7.97	2.7	2.2
Highway Mileage	10000 km	8.07			373.02	45.2	6.7
Passenger Volume	10000	13695			2867892	208.4	9.5
Freight Volume	10000 tons	16097			2587413	159.7	9.0
Number of Civilian Autos Owned	10000	5.09			5099.6	1000.9	12.4
Total value of Post & Telecom Businesses	100 million yuan	2.12			23841.3	11251.9	17.1
Commerce and Foreign Trade							
Total Retail Sales of Consumer Goods	100 million yuan	276.8			108488	390.9	10.7
Total Value of Imports and Exports	US$ 100 million		11.3		25616.3	2265.9	14.2
Value of Exports	US$ 100 million		5.5		14285.5	2596.4	14.5
Value of Imports	US$ 100 million		5.8		11330.9	1952.6	14.0
Education, Science & Technology, Culture and Health							
Number of Students enrolled							
#Colleges and Universities	10000	11.7			2021.0	171.7	9.1
High schools	10000	103.9			8050.4	76.5	7.7
Elementary Schools	10000	2439.1			10331.5	3.2	2.5
Total copies of books published	100 million		2.7		68.7	24.4	5.7
Total copies of journals in distribution	100 million		0.4		30.2	74.5	7.7
Total copies of newspapers in distribution	100 million		8.0		445.3	54.7	7.2
Number of hospitals and health centers	/	2600.0			59572	21.9	5.5
Number of health workers	10000	50.5			503.0	9.0	4.0
Number of beds in hospitals and health centers	10000	8.0			374.8	45.9	6.7
Deposit Balance of Financial Institutions	100 million yuan			93.3	466203	4995.8	16.4
Loan Balance of Financial Institutions	100 million yuan			108	303395	2808.2	15.2

Source: http://finance.people.com.cn/

2 Innovative Urban Institutions and Policies

2.1 Institutional Innovations to Promote Urban Development

Urbanization, a process in which the dispersed rural population converges in dense urban areas, is one of the two major driving forces of social development, and the other is industrialization. Now the problems facing China in urbanization include low productivity in rural areas, weak comprehensive carrying capacity in urban areas and increasingly widened regional differences in the quality of urbanization. At present, the number of employed people working in the primary industry accounts for approximately 40% of all employed across China, while the per capita GDP of the primary industry is only some 10,000 Yuan, far less than the respective level of 70,000 Yuan and 50,000 Yuan of the secondary and tertiary industries. The jobs available in cities and towns are insufficient for the large quantity of surplus laborers from rural areas. The urban housing supply, municipal infrastructures and public facilities fall short of the demands arising out of the rapid progress towards urbanization and the demands of large number of migrant workers from rural areas. Besides, as most talents and capitals flow to coastal developed cities and cities functioning as major administrative centers during the process of urbanization, the vast central-west areas and relatively undeveloped medium-small sized cities and towns are in urgent need of support by national policies. To change these unfavorable situations, the institutional innovations in the urbanization process should be put in first place and then steadily and vigorously push forward the progress of urbanization, so that urbanization will provide a solid base for transformation of mode of economic development. At the same time, continuous efforts will be made to improve the quality of urban planning and development.

Relevant documents of the central government state that at present the focus of institutional innovations in boosting urbanization should be focused on the development of medium-sized and small cities and small towns, so that they will become good bases to promote the prosperity of rural economy, transfer of rural laborers and supply of public services. Efforts and research should be made to deepen the reforms in the of household registration system and to further provide favorable conditions for registering residents in medium-sized and small cities and small towns (especially county-level cities and central towns), so that qualified farmers will be transferred to and settle down in cities and towns with rights equal to those of local residents. A variety of approaches should be taken to improve the living conditions of rural migrant workers in cities and towns, encouraging well-positioned cities to include peasants who have resided in the city for a certain period of time and who have regular jobs into their social security systems. Effective actions should be taken to solve problems associated with the new generation of rural migrant workers and new issues and problems that have arisen in urban and rural areas after peasants are transferred into and settle down in cities and towns. Great efforts should be made to develop intra-county economic activities, seize opportunities arising out

of the industrial relocation, boost convergence of specialty industries and advantaged projects in county-level cities and key towns, enhance the comprehensive carrying capability of cities and towns and attract people in rural areas to move into small towns. And efforts should be made to develop policies on taxes, investment and financing in favorable of small towns. The development of medium-sized and small cities and small towns should be taken into account in making annual plans on utilization of land.

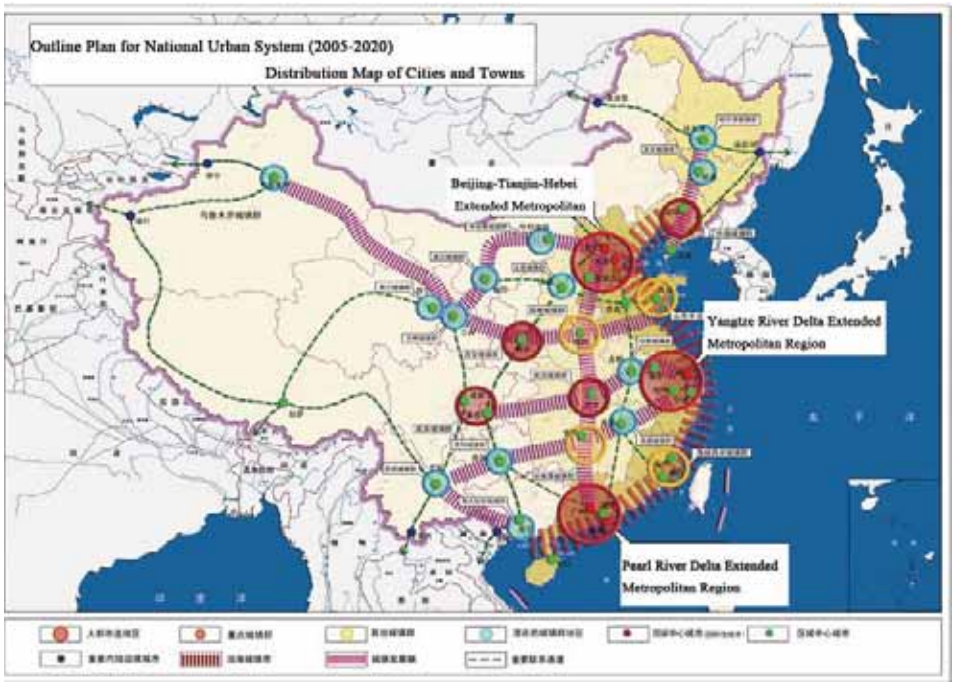
2.2 Regional Spatial Distribution of Cities and Towns

Through development and implementation of rational urban development strategies and urban and rural planning, an urban system in which large and medium-sized cities and small towns jointly develop has taken initial shape and its spatial structure has been gradually rationalized.

Up to now, the Yangtze River Delta, the Pearl River Delta, and the Beijing-Tianjin-Hebei have become three major regions of China with densely distributed cities and towns. In addition, urban agglomerations have formed in the central and southern Liaoning Province, Central Plains of Henan Province, Wuhan of Hubei Province, Changsha-Zhuzhou-Xiangtan of Hunan Province, Chengdu-Chongqing, the Southeast of Fujian Province, the Shandong Peninsular, Guanzhong-Tianshui, and the Beibu Gulf. These urban clusters with one or multiple cities being the nucleus, have already become important economic growth poles, and have played important roles in leading the regional and urban and rural development.

In the eastern coastal areas, dense urban agglomerations have become core zones of economic development of the country. In 2008, the gross product of cities at and above the prefecture level in the three regions of Yangtze River Delta,the Pearl River Delta, and the Beijing-Tianjin-Hebei, totaled 10,624.26 billion Yuan, accounting for 33% of total gross product of all cities on or above the prefecture level across the country; to which the Yangtze River Delta contributed 5,395.6 billion Yuan, the Pearl River Delta contributed 2,974.56 billion Yuan and Beijing-Tianjin-Hebei contributed 2,254.1 billion Yuan, accounting for 16.7%, 9.2% and 7% respectively. The per capita gross product of these regions was 56,566 Yuan, 56,000 Yuan and 37, 494 Yuan respectively. The integration of social and economic activities and breaking of the administrative boundaries have reduced the distance of space and promoted the human movement and economic activities at the regional and national levels. The trans-regional industrial groups, financial networks and trading groups have developed at an rate and scale unparalleled in the history, making it possible for capitals, technologies and information to flow and spread more smoothly around the country, and for the regions to become pivots to promote the regional economic development of China.

In an effort to establish more regional growth poles, enhance the comprehensive power and international competitiveness of China, boost regional cooperation and step up opening up to the world, solve particular difficulties arising from certain areas, enhance capability of self-development of each region, break down administrative borders and barriers, reduce unfair competitions between regions, explore new models for coordinated development and comprehensive administration of regions, and facilitate the interactive regional development and industrial distribution between the eastern and western areas, the State Council successively approved and published in 2009 a range of policy papers relating to regional planning and development, in such large quantity, within such short time intervals and with such wide sphere of influence that were never seen in the history. The areas involved include the Pearl River Delta, Economic Zone on the Western of the Straits, Guanzhong-Tianshui Economic Zone, Liaoning Coastal Economic Zone, Jiangsu Coastal Area, the Tumen River Area, Central Region, High-efficiency Eco-Economic Zone of the Yellow River Delta, Poyang Lake Eco-Economic Zone and the International Tourist Island of Hainan.



Map 1.4 Spatial Planning and Urban Structures / Source: China's Urban System Planning (2005-2020)

Box 1.1 Yangtze River Delta

The Yangtze River Delta (YRD), a region with strongest comprehensive strength, an economic zone with fastest growth rate, largest economic aggregate and greatest development potentials and one of the most populous regions in China, holds a strategic position and function as a driving force in the socialist modernization.

Geographically, YRD refers to the alluvial delta formed in the place where Yangtze River and the Qiantang River merge into the sea. As part of the Middle-Lower Yangtze River Plain, YRD is located to the east of Zhenjiang, Jiangsu Province, north of Hangzhou Bay and south of Tongyang Canal, covering an area of about 50,000 square kilometers.

Economically, YRD refers to the economic zone of Jiangsu and Zhejiang in which Shanghai plays a leading role. According to the guidance provided by the State Council in 2008, the delta has an area of 210,700 square km (accounting for 2.2% of the total land area of China), covering the whole territories of Shanghai and provinces of Jiangsu and Zhejiang. The delta's core zone, which formed around lower reaches of Yangtze River, Taihu Lake, the Qiantang River and Shanghai-Ningbo and Shanghai-Hangzhou-Ningbo inter-city railways, covers a total of 16 cities, including Shanghai, and Nanjing, Suzhou, Wuxi, Changzhou, Zhenjiang, Yangzhou, Taizhou and Nantong in Jiangsu Province, and Hangzhou, Ningbo, Huzhou, Jiaxing, Shaoxing, Zhoushan and Taizhou in Zhejiang Province. In the core zone, Shanghai, which is aiming for an international metropolis, has a central position in YRD; Nanjing, Hangzhou and other cities functioning as regional centers play an important role in China. Cities and towns are densely distributed and a number of distinctive cities are full of vitality. Now the core zone qualifies as a world-class urban agglomeration with more than 60% of level of urbanization.

In 2009, YRD has a permanent population of 148 million, accounting for 11.1% of the total population of China; gross product of the region was 7,179 billon Yuan, accounting for 21. 4% of GDP of China; the region's gross product per capita was 48,425 Yuan (US Dollar 7,086).

General requirements imposed by the State: YRD is to be developed into an important gateway of the Asia-Pacific region, a major manufacturing base for the world and a world-class urban agglomeration that have strong competitive force in the international arena, so that it will make greater contributions to the building of an all-around well-off society and modernization of China.

It is expected that by 2020 a industrial structure featuring service sector will be formed in YRD, under which the primary, secondary and tertiary industries will develop side by side. Technical innovations in major fields will be lifted up to or approach the advanced standards of the world. The delta will play a better leading and fundamental role in the economic development. The internal development within the region will take place in a more harmonious manner and a spatial pattern featuring rational allocation of functions and distinctive qualities will take shape. The discharge amount of major pollutants will be maintained within reasonable limits. The energy consumption per unit of gross product will achieve or stay below the lowest level of the world, so that a better environment in which human beings and nature are in harmony will be created. The social security will be further improved and fundamental public services will be available for every one equally. Furthermore, the region is expected to become the first region in the country that will have fulfilled modernization in all material aspects in a longer period of time.

Box 1.2 Pearl River Delta

Pearl River Delta (PRD) is an important economic pilot region where the economic reform and opening-up policy was introduced earlier than other regions of China. In the past thirty years when China has carried out structural reforms, PRD has led China in establishing an open economic system based market economy by taking location advantage as a neighbor to Hong Kong and Macao and by grasping opportunities arising from the industrial relocations around the world. PRD has become a region with most developed outward-looking economy and a window of China in opening up to the world. In the delta, human and economic resources are highly concentrated. Its level of urbanization is rising rapidly. A group of modern cities boasting the spirit of the times and the uniqueness of the South China have emerged, with fairly complete infrastructures. PRD has become one of the three regions in China where cities and towns are most densely distributed.

Geographically, PRD refers to the alluvial delta formed in the central part of Guangdong where the Pearl River merges into the sea. Composed of three small deltas formed under the impact of the West River, North River and the East River of the Pearl River system, PRD has an area of 11,300 square kilometers.

On October 8, 1994, the idea of building the Pearl River Delta economic zone was first proposed on the third plenary session of the seventh Guangdong Provincial Party Committee. The scope of the "Pearl River Delta" has been expanding with the economic development. In the Plan on Coordinated Development of Urban Agglomerations in the Pearl River Delta (2004-2020), the area of the Pearl River Delta (or the Pearl River Delta Economic Zone) has been defined to include nine cities namely Guangzhou, Shenzhen, Zhuhai, Foshan, Jiangmen, Dongguan, Zhongshan, Huizhou, covering a land area of 41,698 square kilometers.

Later the concepts of "Greater Pearl River Delta" and "Agglomeration of Greater Pearl River Delta" were introduced.

"Agglomeration of Greater Pearl River Delta", or the core area of the "Greater Pearl River Delta", covers the entire territories of Hong Kong, Macao, Guangzhou, Shenzhen, Zhuhai, Foshan, Dongguan, Zhongshan and Jiangmen and Huicheng District and Huiyang District of Huizhou City, Boluo County of Huidong, Duanzhou District and Dinghu District of Zhaoqing City, Gaoyao City and Sihui City, with a total land area of 42,831.5 square kilometers.

"Greater Pearl River Delta" tends to refer to the administrative area consisting of Guangdong, Hong Kong and Macao. "Greater Pearl River Delta" has a total of 181,000 square kilometers of land, accounting for 1.9% of the total land of China.

As of 2009, Greater Pearl River Delta had a permanent population of 104 million, accounting for 7.8% of the total population of China. The gross product of the region was 5,492 billion Yuan, accounting for 16.4% of China's GDP. The gross product per capita was 52,833 Yuan (US Dollars 7,731). The level of urbanization in the core area surpassed 80%, topping the three regions of China where cities and towns are most densely distributed.

The national strategy for the development of the Delta is: in close cooperation with Hong Kong and Macao, to develop

PRD into a globally advanced base for modern manufacturing and service industries and an economic center of China to drive the development of the whole country.

By 2020, the region is expected to take the lead to have the modernization realized, a perfect system of socialist market economy established, industrial structure with modern service and manufacturing sectors developed, capability of technical innovation at the global level created, and coexistence of the people in the region harmonized. The region, in which Guangdong, Hong Kong and Macao will cooperate and complement with each other, will become one of the metropolitan regions in the world with strongest core competitive force.

Map 1.6 Spatial Distribution of Urban Agglomerations in Greater Pearl River Delta

Box 1.3 Beijing-Tianjin-Hebei

The region of Beijing-Tianjin-Hebei (BTH) covers Beijing, Tianjin and Hebei Province. BTH has a total area of 216,000 square kilometers, accounting for 2.25% of the total land area of China. At the end of 2009, BTH had a population of 100 million, accounting for 7.51% of the total population of China. Its level of urbanization was 53.3%. The gross product of the region was 3,639 billion Yuan, accounting for 10.85% of China' s GDP. The gross product per capita in the region was 36,330 Yuan (US Dollar 5,316).

BTH, as the central area of the circum-Bohai agglomeration, is one of the regions of China where the economy, sciences and technologies and cultural undertakings are most developed. Influencing Northeast Asia and functioning as a land bridge between Europe and Asia, BTH is in a strategic position in the international economic structure. It is also an important hub and gateway of China in its economic exchange and cooperation with other countries.

BTH is in the temperate zone and has a semi-humid continental monsoon climate. It is located in the south of Yanshan Mountain, north of the Yellow River, east of Taihang Mountain and west of North China Plain. It encompasses the cities of Beijing and Tianjin, surrounds the Bohai Sea and has a coastline of 640 km. Geographically, It is higher in the northwest and lower in the southeast. It is a fairly complete geographical unit with waters of Haihe River system flowing through the area.

BTH is a region that has a wide range of historical and cultural relics: it has state-level historic cities like Beijing, Tianjin, Chengde, Baoding, Handan, Zhengding, Shanhaiguan; it has world's cultural heritages like the Great Wall, Forbidden City, Summer Palace, Temple of Heaven and imperial mausoleums of the Ming and Qing dynasties, Peking Man Site at Zhoukoudian and Chengde Mountain Resort and the surrounding temples. Beidaihe, known as the "Summer Capital", is the first seaside resort developed in China.

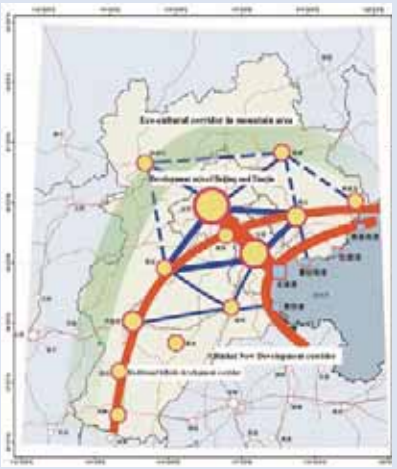
The so-called "Beijing-Tianjin Corridor" (covering the cities of Beijing, Tianjin and Langfang) is the core area of BTH where cities and towns are densely distributed. These three cities have a total land area of 34,759 square kilometers, accounting for 16.9% of that of BTH. In 2009 they had a total population of 34 million, accounting for one third of BTH's population. Their total urban population was 25 million, accounting for three-quarter of BTH's urban population. In 2009 the gross product of the three cities totaled 2,052.7 billion Yuan, accounting for 56% of that of BTH; and their gross product per capita was 60,436 Yuan (US Dollar 8,843).

The planning and development of BTH has received much attention both home and abroad. According to the requirements imposed by the central government:

Beijing is the capital of the People's Republic of China, the political and cultural center of the country and a world famous ancient capital and a modern city as well. Beijing is to develop in such a way that it will provide services for the leading organizations of the government, the international exchange with other countries, the development of sciences and technologies and education, and improvement of the quality of life of the people. Continuous efforts should be made to strengthen the city's radiation and stimulating effects on other regions of China and to build Beijing into an international metropolis boasting prosperous economy, developed culture, harmonious communities and eco-friendly environment.

Tianjin is one of the municipalities of China and the economic center of circum-Bohai region. Centering on the Binhai New District, Tianjin is to make persistent efforts to improve the city's functions, give full play to the role of the city as an economic center and develop the city into an international port, an economic center in northern China and an eco-friendly city with prosperous economy, civilized communities, advanced sciences and educations and good facilities and environment.

Hebei Province is to take full advantage of its proximity to Beijing and Tianjing and the Bohai Sea and cooperate with surrounding areas so that they can complement with each other and develop side by side. Cities of Shijiazhuang and Tangshan are to play a better role of provincial center so that they will stimulate the cities and towns at various levels within the province to participate in regional cooperation and division of urban functions within the region of BTH and circum-Bohai area. Persistent efforts should be made to develop large, medium-sized and small cities and towns simultaneously, guide rational concentration of industries and population in cities and towns, strengthen the comprehensive carrying capacities of cities and towns, and push forward the progress towards urbanization vigorously and steadily.



Map 1.7 Proposed Spatial Development of Beijing-Tianjin-Hebei Region with One Axis and Three Corridors

2.3 Floating Population and Rural Migrant Workers

2.3.1 Floating Population

Normally floating population refers to those people who leave the place where their residence is registered or who leave the place of their domiciles in the legal sense and seek jobs or make a living elsewhere.

The population of China is flowing and moving on an unprecedented scale in its progress towards urbanization. From 1979 to 2009, the floating population grew from 6 million to 211 million. In the coming two or three decades starting from 2010, the floating population will remain above the level of 200 million The complex changes that will take place in the distribution, structure and quality of the floating population will pose tough challenges on the national strategic planning, government's social administration and public services. Therefore, it is of vital importance for the all-around, coordinated and sustainable development of the economic and social sectors in of China to facilitate the orderly flow and reasonable distribution of the population and the healthy development of urbanization.

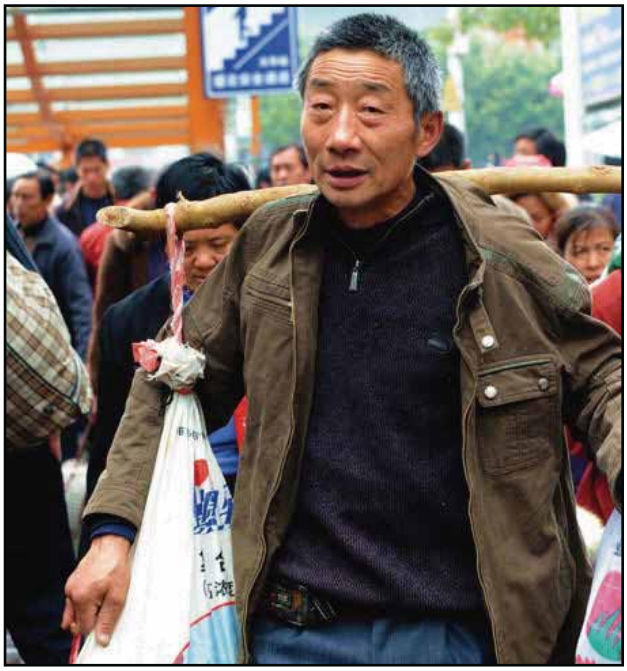
According to 2010 Report on China's Migrant Population Development prepared by the State Population and Family Planning Commission (SPFPC), the floating population of China will show four fundamental trends as stated below in the coming two or three decades:

First, the floating population will continue to grow but at slower speed. According to the report, by 2050 China will have a floating population of around 350 million while its annual increase will drop from the current level of nearly 6 million to about 3 million on the condition that no dramatic change will be made to China's policies on migration of the population.

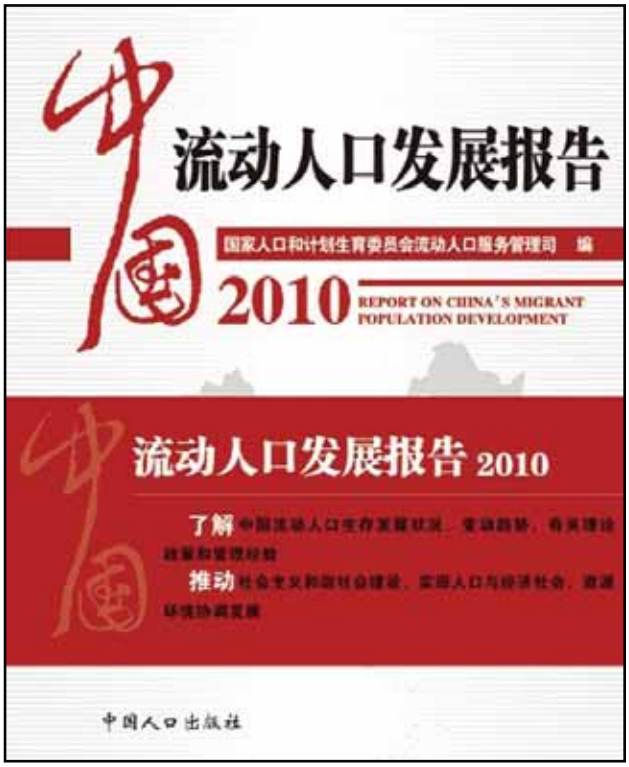
Secondly, this period of global financial crisis has become the right time for adjusting industrial structure and for redistribution of the population. Due to the influence of the crisis, demands for laborers have declined, and long-distance migration of population and convergence of population in coastal areas abated. The population starts to flow towards provincial capitals. Yet the trend of convergence in areas around seas, rivers and main traffic lines will remain unchanged for a long time to come.

Thirdly, in the future the distribution of floating population of China will feature the extended urban regions in the eastern coastal areas as core zones, inland cities as middle axle and central cities in the west as convergence points.

Fourthly, the subsistence-driven floating population will transform into development-driven floating population. The education level of the floating population is slightly longer than the average level of the country. In the floating population, adults account for increasingly large portion. The gender of males and females tends to be in a rough balance. The migration of whole families will increase but most of them are inclined to settle down in the places they have moved in. Consequently, there will be great pressures associated with the livelihood of the floating population and the reform of the service administrative systems.



People moving from rural areas in the beginning of the 21st century (photo taken at Fuzhou Railway Station)



Map 1.8 2010 Report on China's Migrant Population Development

2.3.2 Rural Migrant Workers and their New Generation

Rural migrant workers, short for "contract-based rural migrant workers", are regarded as a new labor force emerging in China's economic reform and opening up to the world and the process of urbanization. Rural migrant workers are still registered as residents in the countryside. They are mainly engaged in non-agricultural activities and some of them go out for work in slack farming seasons so they are both farmers and workers and move frequently. Others work in cities regularly and become important part of industrial working force of the country.

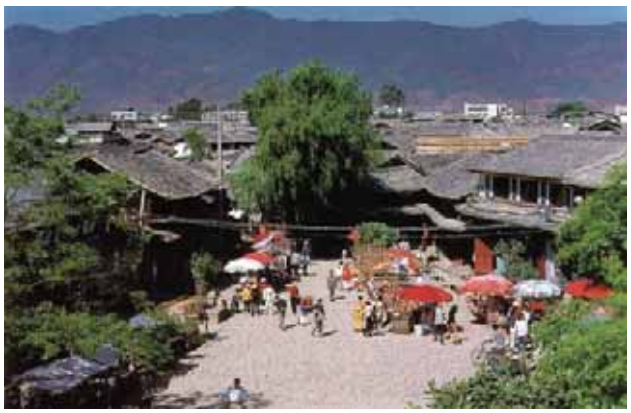
In the process of urbanization and industrialization and under the urban-rural dualistic social and economic structure of China, rural migrant workers are the products of influences by a range of factors like policies, and economic and social systems. In 2009, rural migrant workers in China totaled 230 million, including 150 million working in urban areas and 61.6% of them at the age of 16-30.

The new generation of rural migrant workers means those who were born in the 1980s, now at the age of 16 and above, are engaged in non-agricultural activities outside their hometowns, but are still registered as residents in the countryside. Accordingly, it is estimated that as of 2009 the new generation of rural migrant workers working in urban areas totaled 89 million (or 100 million if the new generation of the 84.45 million rural migrants working in neighboring urban areas is taken into account). This indicates that the new generation of rural migrant workers, accounting for nearly half of the 230 million workers (225 million in 2008) across the country, is playing an increasingly important role in the economic and social development of China.

On one hand, the new generation of rural migrant workers naturally has similar qualities with other rural migrant workers as they are all under the same rural-urban dualistic structures economically and socially with equal social status. On the other hand, the new generation is quite distinct from the traditional rural migrant workers as they have grown up in an era when China has been undertaking economic reform and opening up to the world and when the social transformation of the country is speeding up. In addition, they have some common qualities with other young people of the same age. Generally speaking, the new generation of rural migrant workers has four characteristics as a group: spirit of the times, variability, dualism and marginality.

As illustrated by experiences of other countries, the migration of peasants from rural areas to cities and their transfer from agriculture to non-agriculture can not be fulfilled successfully unless the peasants are covered by the social security system and no longer rely on the land as the only means of security. As far as the new generation of rural migrant workers are concerned, three types of social security are necessary for their regular work and life in cities: first, the pension and health insurances to cover expenses when they are old age and when they are ill; secondly, the unemployment benefits they will be entitled to in case they lose their jobs; thirdly, the minimum subsistence allowance as a last resort. However, a survey shows that at present only 21.3%,34.8% and 8.5% of the new generation of rural migrant workers is entitled to pension, health insurance or unemployment benefits respectively. The employers who pay these insurances tend to make minimum contributions as allowed by the local regulations. Since the minimum subsistence allowance targets only registered urban residents, generally rural migrant workers are not entitled to it. Apparently, there is a wide gap between the social security that the new generation of rural migrant workers expects for living and working stably in cities and the social security that they now actually entitled to.

In recent years, the central government has introduced a range of policies and measures aimed at addressing the problems faced by rural migrant workers. As China has entered a new phase of coordinated development of rural and urban areas and speedy transformation of economic patterns, the new generation which is different from the traditional rural migrant workers has become the major part of the rural migrant workers, and will become a dominant part of the industrial workers in the future. Their claims and problems have accumulated to such an extent that they start to have negative impact on China's political and social stability and the sustainable development of its economy, and on happiness of rural migrant workers' families and their individual development. Thus it has become a pressing and vital issue in the development of China to solve the problems associated with the new generation of rural migrant workers with specific actions.



Chapter Two

02

Urban Housing Development in China

1 Retrospect of Urban Housing Development and Policies

As the urban-rural dual structure in China has the distinct features, there are significant differences between the urban and rural housing. Before the liberation in 1949, more than 70% of Chinese urban households lived in one-room of tile-roofed houses or mud houses with 3 to 5 family members and the rent was shockingly expensive. After the founding of new China, an in-kind distribution system was implemented for urban housing, featuring "investment by the State Government and employers, public property right, unified management and distribution, and maintaining the houses by rents". After the Reform and Open-up, the in-kind distribution system was replaced by the monetary distribution system gradually. The rural houses were constructed by villagers using the free house land and the self-financed funds, and such practice remains nowadays.

1.1 Progressive Reform of the Housing System

After the founding of new China, as the state government began to implement the planned economic system, the development and supply of houses was implemented under the urban-rural dual system, similar to other socio-economic activities in the early stage of socialism. The national housing policy was only applied to the cities and towns, but not the rural areas. The houses of rural residents are all managed by the rural residents. In urban areas, the scheme of housing development and distribution was implemented where the "welfare" houses with the features of "low rent, high subsidies, distribution in kind" were uniformly managed and distributed by the state government. The government or the employers were fully responsible for the development, management and maintenance of houses. The houses were the state-owned property and distributed in kind, while the employees only paid a very low rent. This "welfare" urban housing system played a positive role under the specific historical conditions. However, this system was inefficient in allocation of resources and not conducive to a virtuous cycle of housing investment. Therefore, the state government and the employers took a heavy burden in the development, maintenance and management of the houses. Moreover, the end beneficiaries of this housing system were the employees of the state-owned enterprises, while other urban residents were neglected in the worst conditions and with the most difficulties.

According to statistics, during the period from the founding of new China to the beginning of the policy of reform and opening-up, the state government put investments of RMB 37.4 billion accumulatively in residential houses and developed 530 million square meters of residential houses. But those investments and developments could not satisfy the needs of the growing urban population. In 1978, the housing construction area per capita was only 6.7 square meters in 190 cities nationwide, and roughly half of urban households were lack of or had no housing. Large numbers of residents lived in very uncomfortable and inconvenient corridor-shared apartments, tenement yards and shanty towns. As a result, it was often that two families shared a house and several generations squeezed in a house. Housing strategy became one of the most serious problems in the urban communities at that time.

The housing system reform was launched in 1980. The "welfare" housing system in the urban areas of China was phased out after 1998, and a monetary housing distribution system was adopted and implemented. Since 2003, the housing development has been accelerated and housing consumption has been effectively stimulated. The residence-based real estate industry becomes one of the pillar industries of the national economy. At the same time, the housing conditions of urban residents have been improved significantly. The housing security system has also been improved gradually since 2007.

1.2 Increased Housing Investment and Accelerated Housing Development

From 1978 to 2008, the investment in residential housing nationwide increased from RMB 3.92billion to RMB 3.09 trillion, and its proportion in the gross domestic product also increased from 1.1% to 10.27%. From 1980 to 2007, the investment in new urban residential housing increased from RMB 13.2 billion to RMB 2.12 trillion, and its proportion in the gross domestic product also increased from 2.9% to 8.5%. The high-speed increase was kept during the periods from 1980 to 1987, from 1992 to 1995 and from 1998 to the present.

From 1978 to 2008, the area of annual new residential housing built in urban areas increased from 38 million square meters to 660 million square meters, and the

accumulative stock of new residential housing reached 10.2 billion square meters. The number of completed residential units among per thousand urban residents increased from 6.79 in 1999 to 11.77 in 2007 .The internal and external supporting facilities of the new residential housing became more and more complete, and the functions thereof were further improved. Progress was made in building energy conservation, environmental improvement and property services.

The housing marketization reform dramatically increased the ownership ratio of private residential housing among the urban residents. In 2008, the ownership ratio of private residential housing reached 87.8%, an increase of 78.4% than in 1983. The living conditions of urban residents were improved significantly. At the end of 2008, there were 4.5% of urban households living in individual residential buildings, 83.0% of households with urban permanent registration living in apartments, and only 12.5% of households with urban permanent registration still living in corridor-shared apartments and bungalows. The improvement in the housing facilities was even more significant. In 2008, 98.4% of households had tap water facility in their residential housing, 35.0% more than that in 1983; 79.1% of households had bathroom, 72.3% more than that in 1983; 62.9% of households had air-conditioners or heaters, 46.8% more than that in 1983. Most of households got rid of the smoke-stricken kitchens, and began to use the clean and efficient cooking fuels. In the very beginning of the Reform and Opening-up, 58.7% of households were using coals as the main fuel, while in 2008, 87.3% of households were using pipeline gas and liquefied petroleum gas, and the proportion of households using coals as the main fuel decreased to 8.3%. The living environment of the large number of urban residents was improved dramatically.

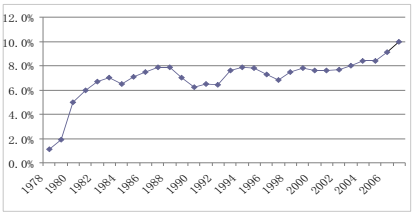


Figure 2.1 Proportion of Residential Housing Investments Nationwide in GDP(1978-2007)

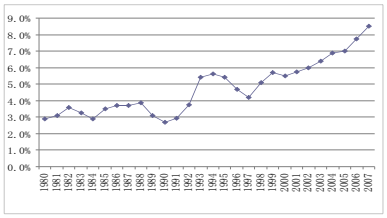


Figure 2.2 Proportion of Urban Residential Housing Investments in GDP(1980-2007)

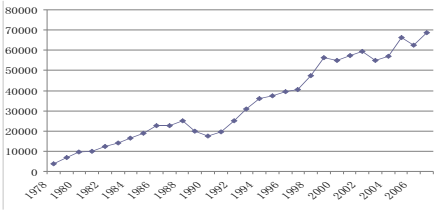


Figure 2.3 Completed Acreage of Urban Residential Housing (1978-2007)

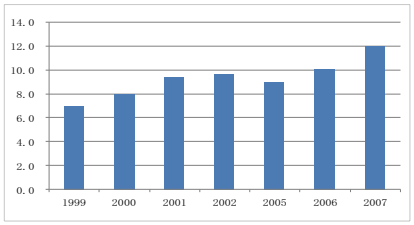


Figure 2.4 Number of Completed Units of Residential Housing Per Thousand Urban Residents

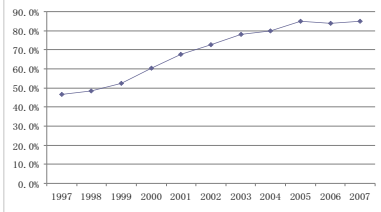


Figure2.5 Proportion of Real Estate Development Investment in Urban Investments

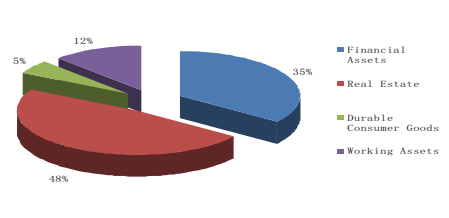


Figure2.6 Distribution of Urban Household Property Structure in 2002

1.3 New Social Housing System launched in the Reform

The social housing system is an important part of the public housing policy, and its essence is that the government uses the national and social resources to solve the housing difficulty facing the urban low-income households. Aiming at the healthy development of urban areas, to provide the security housing is incumbent upon the governments, and its social benefits are higher than the economic benefits.

In fact, among the urban housing systems adopted since the Liberation of China, certain social housing policies have been implemented, such as the distribution of "welfare" housing and housing subsidy paid to urban residents since the 1950s, although these policies cover only a part of urban residents and the relevant policies are quite imperfect, and the coverage is very low. Since the large-scale housing system reform started in the 1990s, the unit-based function formed under the planned economy system has been changed and the "unit-based society" has been dissolved. As a result, the function of housing supply has mainly been taken by the market. Under the new circumstances, the demand of social housing becomes higher, which requires the government to take the lead to quickly set up a housing security system with wide coverage.

At present, the coverage of the urban social housing system, in general, is still relatively small, and can not meet the needs of rapid development of urbanization. The availability of social housing, such as low-rent housing, is generally low. A considerable number of low-income households are still living in shanty towns and other makeshift shelters formed at the early stage of industrialization, and low-income urban residents (including new employees and migrant workers) are remarkably lack of housing affordability. Most low-income employees are not included in the coverage of the housing provident funds, and no priority in the application of the housing provident funds is granted to the low-income workers.

[1] The number of completed residential units is calculated on the basis of the completed area of urban residential housing in each year and the area of each unit of commercial residential housing.

2 State of Urban Housing Development and Policies

2.1 New Housing Policies Adapted to Economic Reform and National Conditions

After the continuous exploration over 30 years after the founding of New China, especially after 1978, the policies regarding the distribution and supply of the urban housing in China have undergone a fundamental change, and a housing policy basically adoptive to the progress of economic reform and essentially consistent with the national conditions has been formed.

2.1.1 Housing Supply Policy.

It focuses on the supply of commercial residential housing, implements the social housing measures for the low-income families with the difficulty in housing and grants appropriate support to the moderate-income families with the difficulty in housing.

(1) Commercial Residential Housing. The commercial residential housing is developed through the market channels and may be traded freely on the market, including the commercial residential houses and privately built houses. The commercial residential housing is mainly catered to the families with the moderate or higher incomes.

(2) Social Housing. The social housing is mainly aimed for the urban families with the low-income and difficulty in housing, including low-rent houses and affordable houses.

(3) Policy-guided Housing. Policy-guided Housing is mainly aimed for the families with lower or moderate income and with difficulty in housing, including the houses for relocated households from shanty towns, price-restricted commercial residential houses, public rent houses and employer-built houses.

2.1.2 Housing Distribution Policy.

The policy of monetary housing distribution includes wages, housing provident funds and housing subsidies.

(1) Housing Provident Fund. Housing provident fund is contributed by the employees and the employers respectively, with no less than 5% of the average monthly wage of the employees in the previous year. The housing provident fund is owned by the employees, and the employees may use the fund to purchase, build, modify and renovate their houses.

(2) Housing Subsidy. In accordance with the policy, employees shall be provided with subsidies when the unit price of real estate is comparatively high, when they do not have residential house or whose area of residential house is less than the average. However the housing subsidy has not been granted in most areas.

2.1.3 Supporting Policies.

(1) Fiscal Policy. This applies to including the low-rent housing security fund into the annual budget of local governments, and granting financial support by the central government for the development of low-rent housing in the middle and west areas in China. Since 2010, an appropriate subsidy has been granted to the development of public rent housing and reconstruction of shanty towns nationwide. With respect to the development of social housing, the tax is reduced or exempted, and also various administrative fees and government charges are exempted. Its purpose is to encourage the rational housing consumption through the adjusted tax rates.

(2) Financial Policy. With respect to the housing development, the facility loans are developed by the commercial banks. A preferential loan rate is granted for the development of the low-rent housing and the affordable housing. The loan facilities for the consumer housing mainly includes individual housing commercial loan and housing provident fund loan. The state government adjusts and controls the market through the adjustment of loan interest rate, down payment proportion and differentiated interest rate (such as the loan interest rate for the second housing is higher than that of the first).

(3) Land Policy. The lands for the commercial residential housing are transferred by means of "bid, auction and listing". The lands for social housing are assigned and granted in priority. The lands for low-density and large-housing projects are strictly restricted, while the granting of lands for the villa and similar housing is stopped.

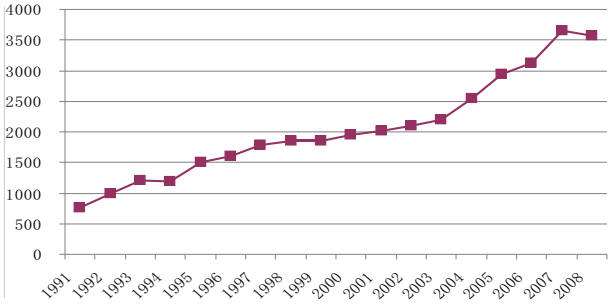


Figure 2.7 Unit Price of Residential Housing (Yuan/M2), 1991-2008

Box 2.1 Case Study:Public Rent Housing in Chongqing

In early 2010, Chongqing CCP Municipal Committee and Municipal Government adopted a major policy to develop 20 million square meters of public rental housing ("Public Rental Housing") in the down town of Chongqing. The key purpose of the policy is to solve the housing problem facing the "sandwich-class" population, to form a "5 +1" social housing system (including low-cost rental housing, affordable housing, reconstruction of uninhabitable houses and shanty towns, reconstruction of urban villages, and apartments for rural migrant workers, plus public rental housing). It also strive to achieve the "full coverage" of the urban social housing system, so as to build a housing security system with unique characteristics of Chongqing, i.e. high-end housing with market, middle-end housing with support and low-end housing with security.

According to the decision of Chongqing Municipal Government, the **nature of the Public Rental Housing** is the housing supported by the policies of the Government, with the restricted unit space the preferential rent rate, available for the persons worked in Chongqing but without housing or the families with difficulty in housing. The building area of each unit is limited to 35-80 square meters, and the rent is to cover the building cost plus the operation and maintenance costs. **Eligible Applicants**: An applicant must be an urban family in moderate or low income or new employee with stable employment and income source (including college graduates and migrant workers), who does not have housing or whose area of housing is less than 13 square meters per capita, and the applicant is exempt from the registered permanent residence restriction. **Scale and Schedule of Development**: About 20 million square meters of Public Rental Housing will be developed in the downtown and suburb areas respectively in next ten years, and about 40 million square meters of Public Rental Housing will be developed by 2020. In the first three years and the following seven years, about 10 million square meters of Public Rental Housing will be developed in the downtown respectively. **Principle of Planning and Layout**: the public rental houses will be built in 21 large-scale concentrated settlement areas between the 1st Ring and 2nd Ring of the downtown according to the principles of balanced layout, easy accessibility, fully equipped and comfortable living environment. The scope of floor area limitation is also set down. **It is proposed to establish a Housing Security Bureau** (vice bureau level and public institution), which will be responsible for the social housing development in Chongqing.

Principles of Location for the Public Rental Housing: (1) balanced layout, i.e. each concentrated inhabitation area will have certain public rental houses; (2) supported by public transportation facilities, i.e. each area will be supported by the public transportation facilities, and each area is close to a metro line and the distance to the metro station is about 10 minutes' walk, and the public transportation terminal will be designed and developed simultaneously and the area is highly supported by the high-density and common bus lines; (3) balance between work and living, i.e. there are some industrial facilities in the neighborhood and the industries are highly developed; (4) fully equipped, i.e. each area will be equipped with some supporting facilities, and, in order to ensure the comfortableness and environment quality of the pubic rental houses, each plot of the public rent houses will be equipped with a school, kindergarten, commercial, cultural and sporting facilities; (5) good environment and living conditions. **Specifications**: The plot ratio is 3.5-4.0; building density≤35%; green space coverage ≥30%; building height limitation ≤100m; every 300 square meters shall have one parking space; the style of buildings should manifest the local and traditional cultural characteristics in Chongqing; 10% of the building area of the public rental houses in each zone is allocated for the public service facilities. In order to the satisfy the needs of various inhabitants, there are different types of apartments including single-equipped room, one-room apartment, two-room apartment, small three-room apartment, with an area from 35 square meters to 80 square meters.

2.2 Healthy Development of Real Estate Market with Government's Priority on Housing for Low-income Families

In 2007, the per capita floor space of of urban residents reached more than 28 square meters, but the quality still has much room to improve. The proportion of the housing with complete services increased from 24% in 1985 to 74% in 2002, and further to 81% in 2007. The internal and external supporting facilities of the new residential housing buildings became more and more complete and the function thereof was further improved. Moreover, progress was made in the building energy conservation, environmental improvement and property services.

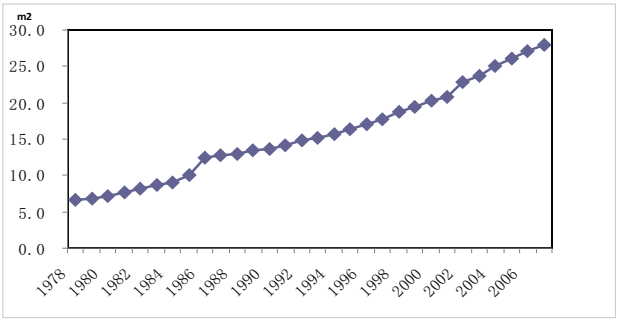


Figure 2.8 Per Capita Floor Space in Urban Areas, 1978-2008

In 2009, the investments in the development of real estate reached RMB 3.62 trillion, an increase of 16.1% compared with the figure in 2008. Among the investments, the investments in the commercial residential housing nationwide reached RMB 2.56 trillion, an increase of 14.2% and accounting for 70.7% of the total investments in the development of real estate. The completed area of residential housing reached 577 million square meters, an increase of 6.2%. From January to November, the average unit price of the commercial residential housing nationwide reached RMB 4,587/square meter, an increase of 28.56% compared to the average price in 2008 and exceeding the increase rate of 19% in 2004. The increase rate in 2009 became the highest regarding the unit price of housing in last ten years.

Table 2.1 Main Indices for Development and Sale of Properties in 2009

Index	Unit	Absolute Number	Annual Increase against last year %
Total Investment Amount	RMB 100 Million	36232	16.1
Among Which: Residential Housing	RMB 100 Million	25619	14.2
Among Which: Residential Housing Less Than 90m^2	RMB 100 Million	8351	24.1
Among Which: Affordable Housing	RMB 100 Million	1139	17.3
Total Housing Construction Area	Ten Thousand M^2	319650	12.8
Among Which: Residential Housing	Ten Thousand M^2	250804	12.5
Newly Launched Housing Construction Area	Ten Thousand M^2	115385	12.5
Among Which: Residential Housing	Ten Thousand M^2	92463	10.5
Total Completed Housing Construction Area	Ten Thousand M^2	70219	5.5
Among Which: Residential Housing	Ten Thousand M^2	57694	6.2
Total Acreage of Sold Commercial Housing	Ten Thousand M^2	93713	42.1
Among Which: Residential Housing	Ten Thousand M^2	85294	43.9
Source of Funds in This Year	RMB 100 Million	57128	44.2
Among Which: Domestic Loans	RMB 100 Million	11293	48.5
Among Which: Individual Mortgage Loans	RMB 100 Million	8403	116.2
Total Acreage of Lands Acquired in This Year	Ten Thousand M^2	31906	-18.9
Total Acreage of Lands Developed	Ten Thousand M^2	23006	-19.9
Total Cost of Land Acquisition	RMB 100 Million	6039	0.7

Source: National Economic and Social Development Statistics Bulletin, 2009

In the fourth quarter of 2008, according to the directive of the CCP Central Committee and the State Council, all regions and departments adopted the policies and measures to promote rapid economic growth in accordance with the requirements for sustaining the growth, expanding domestic demand and improving people's life. With such policy and measures, the real estate market in China was also significantly developed. The transactions in the real estate market were increased and the investments in the real estate development were promoted, which played a positive role in inspiring confidence and responding to the international financial crisis. From the second half of 2009, with the rebound of the real estate market, the price of real estate in some cities was increased too fast. Therefore, the State Council reinforced the adjustment and control over the real estate market, and issued two ordinances regarding the promotion of stable and healthy development of the real estate market and firmly curbing the surge in housing prices in some cities.

To speed up solving the housing difficulties of low-income households, especially those residents living in shanty towns, the State Council urged all local governments

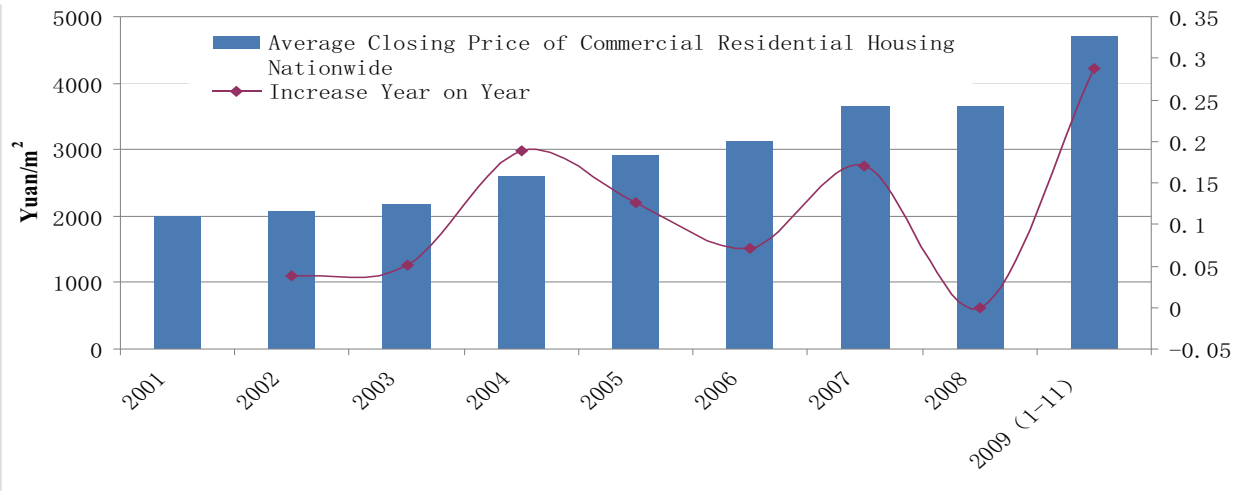


Figure 2.9 Average Unit Price and Increase of the Commercial Residential Housing, 2001-2009
Source: China Real Estate Statistical Yearbook, 2009

to increase the supply of low-rent housing and affordable housing through the reconstruction of urban shanty towns, construction, renovation, government acquisition of rental and affordable housing and strive to fundamentally solve the housing difficulties of 15.4 million low-income households from 2009 to the end of 2012. The "Government Work Report" of 2010 proposes to construct 3 million units of social housing, reconstruct 2.8 million units of various shanty towns and expand the scope of the pilot reform of rural dilapidated housing. With the authorization of the State Council, the Ministry of Housing and Urban-Rural Development, the National Development and Reform Commission and the Ministry of Finance issued the 2009-2011's Low-rental Housing Security Planning in May 2009, which proposes the targets, policies and measures to basically solve the housing difficulties of 7.47 million low-income households within three years. In December, 2009, the Ministry of Housing and Urban-Rural Development, the National Development and Reform Commission, the Ministry of Finance, the Ministry of Land and Resources and the People's Bank of China promulgated the *Guidance for Reconstruction of Shanty Towns in Urban and State-owned Industrial Facilities and Mining Areas* in December 2009, which proposed a target of reconstruction of the shanty towns in urban and state-owned industrial and mining areas, namely, to basically complete the reconstruction of concentrated shanty towns in next five years, and to complete this task in next three years in the regions with the suitable conditions. The Guidance proposed the policies and measures in four aspects, including funding through various channels, intensified policy support, ensured land supply and proper compensation for resettlement. The core principle is that the state treasury will grant appropriate support to the reconstruction of the shanty towns in urban and state-owned industrial and mining areas. The provincial, municipal and county governments shall effectively increase the capital investments in the reconstruction of shanty towns. The financial institutions are encouraged to extend loans to the reconstruction projects that meet the conditions of loans. It is encouraged to reconstruct the shanty towns in the state-owned industrial and mining areas by means of joint construction, and to encourage the social funds to participate in the reconstruction.

In recent years, it is quite conspicuous that some moderate-income or lower income families can not afford to rent or purchase the housing. Meanwhile, with the rapid progress of urbanization, it appears that new workers can not afford to purchase the housing and the living condition of migrant workers is to be improved urgently. In June 2010, the State Council held a national work conference on the public rental housing; with the authorization of the State Council, seven departments, including the Ministry of Housing and Urban-Rural Housing Development, jointly promulgated the *Guidance for Accelerating the Development of Public Rental Housing* in June 2010, which is to address the difficulty of housing facing the urban moderate-income or lower income families. According to the Guidance, the public rental housing shall be mainly supplied to the urban moderate-income or lower income families who have the difficulty in housing. The regions, if the conditions permit, may also supply the public rental housing to new workers and migrant workers who have a stable job and will live in the city for a certain number of years. Public rental housing has been developed rapidly in coastal cities, such as Xiamen, Shenzhen, Qingdao, Tianjin, Fuzhou, Beijing, Hangzhou, Changzhou, and also in few inland cities, such as Chongqing and Chengdu.

2.3 Obvious Contradictions and Problems in Urban Housing Development

Due to the imperfection of the current housing policys, some measures have not been effectively implemented and carried out; together with many new circumstances emerged during the economic and social development, there are still some deep-rooted contradictions and problems in the housing sector in China. Such problems include incomplete reform in the housing distribution scheme, obvious contradiction between housing supply and demand, fast rise of housing price, significant difference in housing occupancy and difficult task of housing security, etc. Nowadays, the urban housing problem is particularly prominent for some moderate-income or lower income families and "new urban residents" who are in the middle or lower income groups. The housing system with the government leadership, community participation, uniform policy and various channels is under development.

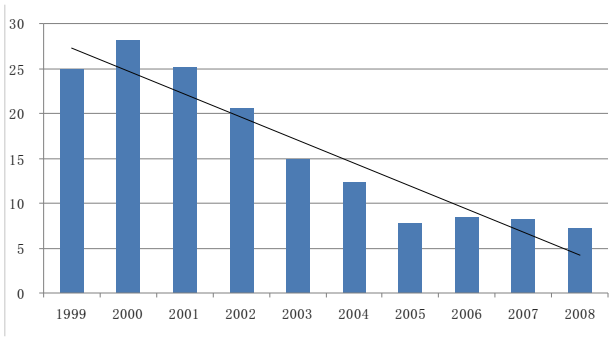


Figure 2.10 Proportion of Completed Affordable Housing in Total Completed Residential Housing in China, 1999-2008
Source: China Statistical Yearbook, 2009

The problem of regional imbalance in the urban housing development is prominent. There is a significant regional difference in the investments of urban housing development and residential housing price in China. The per-capita housing investment nationwide and the residential housing price have a significant positive correlation with the level of economic development. In 2008, Beijing's per-capita housing investment was RMB 60,661,800 and Shanghai's per-capita investment was 47,835,100, while the per-capita investment in western region, such as Guizhou and Qinghai Province, was only RMB 8,217,400 and 11,784,600 respectively. In 2008, Beijing's average residential housing price was RMB 11,648 per m^2, while the average price in Gansu Province was only RMB 1,851 per m^2, a difference of 6.29 times. From the aspect of the structure of completed residential housing, the proportion of villas and high-end apartments is higher in the developed regions, such as Beijing, Hainan, Shanghai and Guangdong. But the proportion of the affordable housing is comparatively lower.

From the aspect of the structure of total price, the total price is pushed by the unit housing price, and the extremely high priced luxury houses are created by the investments. The total construction area decreased in first-tier cities like Beijing and Shanghai. During January to November in 2009, the construction area of commercial residential housing in Shanghai, Guangzhou and Shenzhen all declined, compared to that of the same period in 2008. The construction area of housing in the second-tier and third-tier cities rose significantly. During January to November in 2009, the building areas of commercial residential housing in Taiyuan, Xi'an and Shijiazhuang increased more than 50% over the previous year. Chongqing and Chengdu, the south-west cities, had the largest area of housing construction.

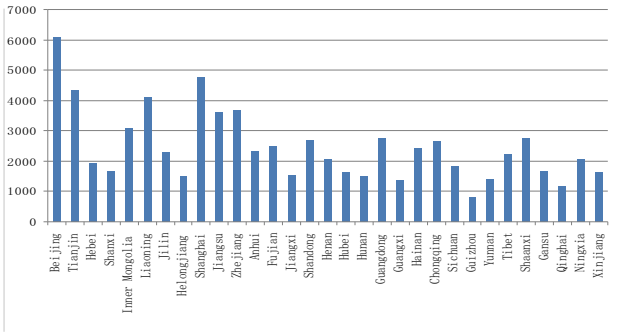


Figure 2.11 Overall Investment in Residential Housing, 2008 (in Per Capita/10,000Yuan) Thousand Per Capita)
Source: China Statistical Yearbook, 2009

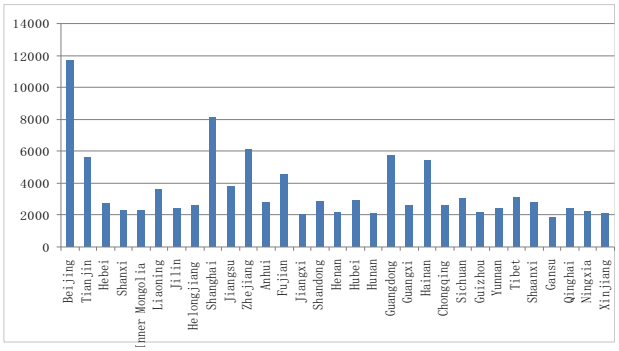


Figure2.12 Unit Price of Residential Housing, 2008 (Yuan/m^2)
Source: China Statistical Yearbook, 2009

Figure 2.13 Average Residential Housing Price in 35 Large and Middle-size Cities and its Increase, 2009
Source: China Real Estate Statistical Yearbook, 2009

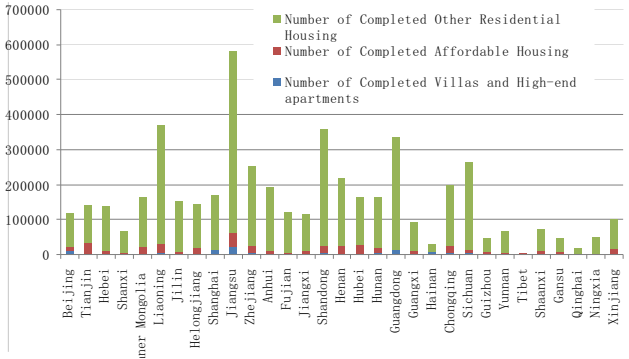


Figure 2.14 Number of Villas, High-end Apartments, Affordable Apartments and other residential units completed in 2008
Source: China Statistical Yearbook, 2009

Map 2.1 Increase Rate of Investment in housing Developments in china, 2009

Map 2.2 Investment in Housing Development in china, 2009 (RMB 100 Million)

Box2: Living in of "Ant Tribe" in Beijing

"Ant Tribe" is a vivid description of contemporary graduates living in the "urban villages". Among all cites in China, it is typical in Tangjialing Village in Beijing. In this village where you can complete your walking around for less than one hour, at least there are 100,000 graduates living there. The houses vary greatly in sizes, from small rooms of a few square meters to large rooms over 10 square meters. All these houses are in low quality.

"Ant Tribe Urban Village" – Tangjialing Community. Source of Photos: Lu Xiangyu, School of Architecture in Tsinghua University, 2009

Green and Ecologically Sound Urban Community in Qiemo County of Xinjiang

"Targeted Apartments" in Yangzhou, winner of UN-HABITAT Scroll of Honor

3 Urban Community Development

Community is the basic unit of society where people live and meet. The community harmony is the foundation of harmony for a society as whole. The urban communities are the places where the social management should be focused, the livelihood of people improved, and social stability maintained. With the further development of industrialization, information technology, urbanization, marketization and internationalization, China is facing profound changes in social structure, pattern of interests and ideas. To construct harmonious communities has important practical significance and far-reaching historical significance for protecting the basic living rights of urban and rural poor people, satisfying the diversified material, cultural and living needs of the ordinary residents, inspiring enthusiasm, initiative and creativity of the public to participate in social development, and creating a more favorable social environment for the social and economic development.

3.1 Expansion of Communities and their Services

With the development of socialist market economy and the acceleration of urbanization process, urban communities have more and more important role to play in the economic and social development, and the community residents have more and more demands for the community services. The community service system needs to be developed and adapted to the socialist market economic system to meet the needs all members of the community by various service providers, with perfect service functions and high quality services and management, so that members can be assisted and serviced whenever there is need.

At the end of 2009, there were altogether 175,000 various community service centers in China, of which, 10,003 were integrated community service centers, 130 more than that of last year. There were 674 integrated community service centers that provided accommodation, while 9,329 integrated neighborhood service centers did not provide accommodation. There were 53,000 neighborhood service centers and 112,000 other kinds of community service facilities. There are 693,000 city convenience and service points, and 289,000 volunteer community service organizations.

These community service organizations are actively providing community employment opportunities and community services, becoming a new source of creating jobs. In 2009, urban communities absorbed 2.158 million employees, of which, 531,000 employees were laid-off workers.

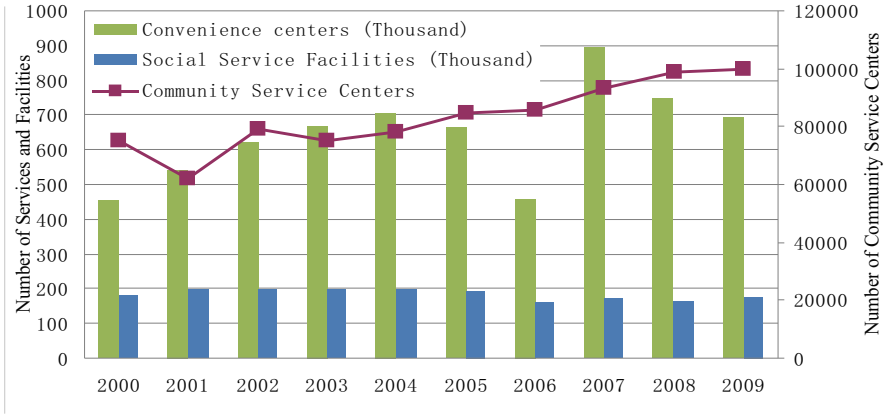


Figure 2.15 Community Service Facilities, 2000-2009

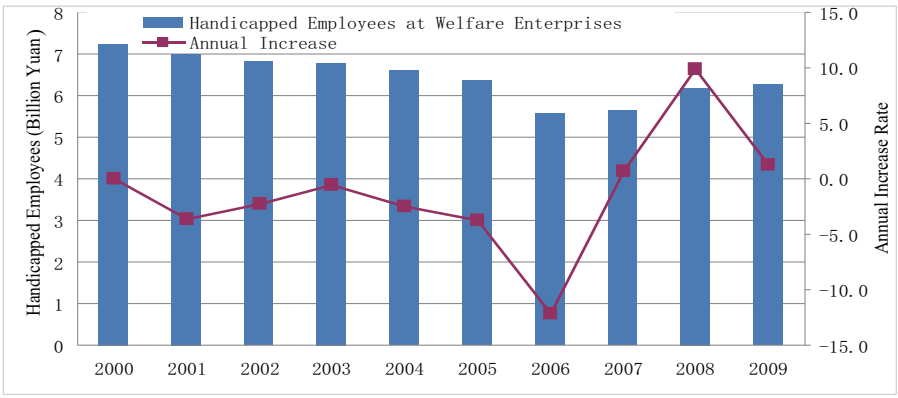


Figure 2.16 Handicapped Employees at Welfare Enterprise

3.2 Building of Community Self-governance Organizations

In accordance with the Constitution and relevant laws of China, the urban and rural areas shall establish the self-education, self-management, self-service grassroots-level political organizations at the residential places, namely urban residents committees and rural villagers committees. These committees may establish sub-committees for mediation, public security and public health. Their main tasks include handling the public affairs and welfares within the residential area, settling the civil disputes, assisting the relevant departments in maintaining the public security, carrying out cultural activities, and conveying the views, suggestions and requests of residents to the government. To establish and improve these committees is an important content of the construction of socialist democracy at the grassroots level. It is important for the expansion of grassroots democracy, ensuring that the people may directly exercise their democratic rights and manage their own affairs according to law.

At the end of 2009, there were 684,000 grassroots self-governance organizations nationwide, of which there were 599,000 villagers committees, 4.805 million villagers groups, and 2.34 million members of villagers committees. There were 84,689 urban residents committees, 1.295 million residents groups and 431,000 members of residents committees.

The structure of villagers committees and urban residents committees has been further adjusted. There are 74,000 villagers committees that have completed the elections. There are 81.724 million villagers who have restricted their participation in the elections, and 65.215 million registered villagers who have actually participated and voted in the elections.

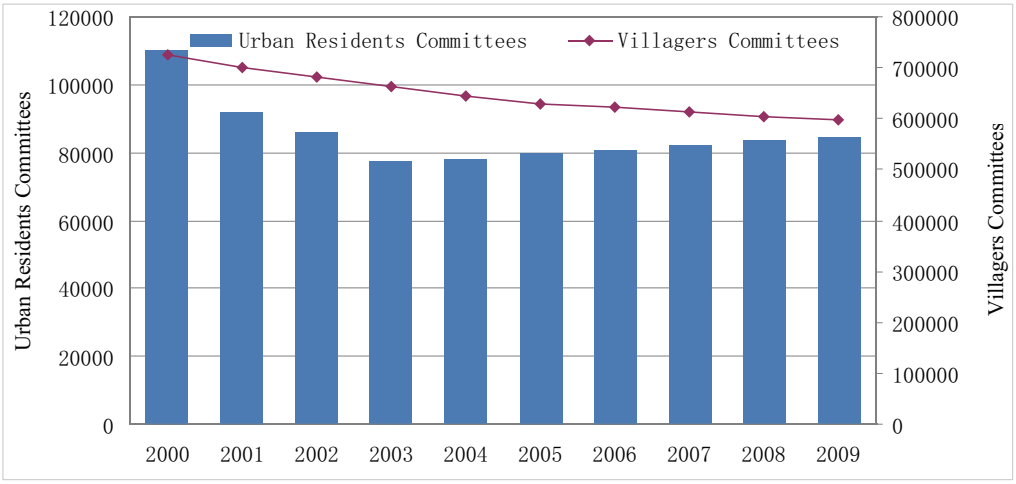


Figure 2.17 Grassroots Self-governance Organization, 2000-2009

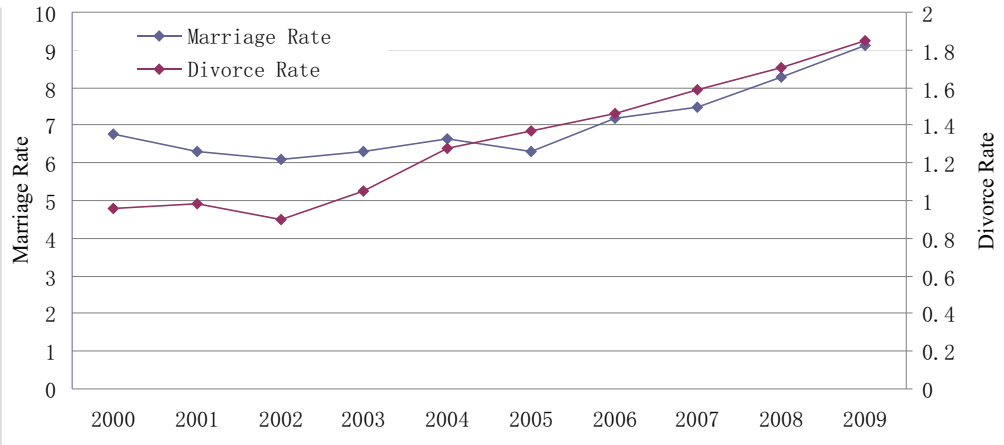


Figure 2.18 Marriage and Divorce Rates

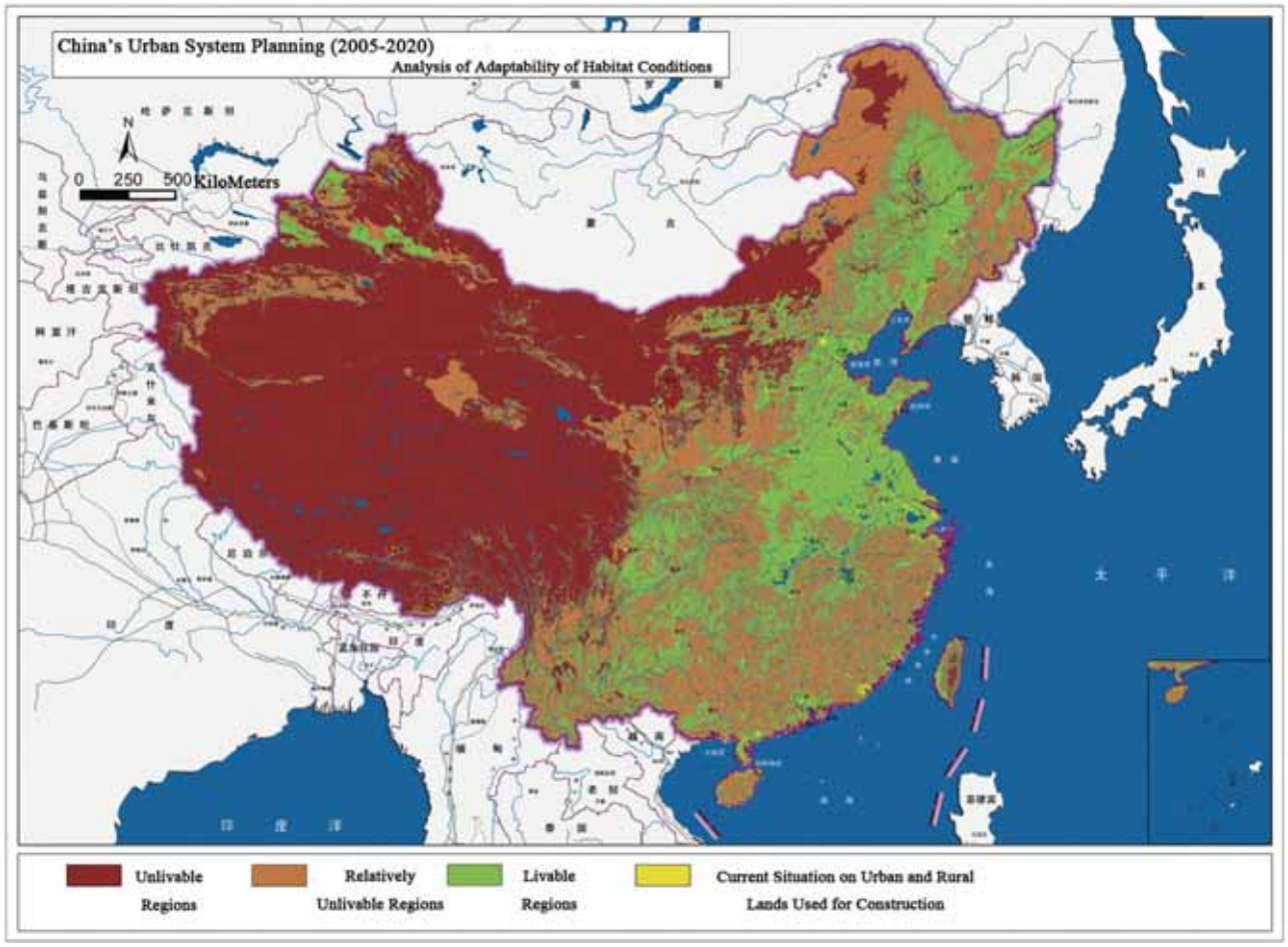
Chapter three

03

Urban Environment and Infrastructure in China

China has a vast territory, but not much land suitable for human settlement and urban development. Throughout China, the regions unsuitable for human survival and habitation approximately account for 52% of China's land area. Such regions are mainly distributed in the west of the "Aihui-Tengchong" line, with a large proportion of Gobi deserts, high and cold plateaus, and also including eastern wetlands and coastal tidal flats, etc.. The relatively unlivable regions account for 29% of China's land area, and are mainly distributed at the mountainous and hilly zones in central and southern China. The livable regions merely account for 19% of China's land area, and are mainly distributed at eastern plains, Sichuan Basin and other similar zones with smooth terrains (Figure 3.1). Being affected by the adaptability extent of the conditions for habitation, the spatial layout of China's urban regions is horizontally manifested in a differentiation regularity of "dense east and sparse west". Cities are mostly located at eastern and coastal regions, especially at the agglomerations such as the Yangtze River Delta, the Pearl River Delta, the Beijing-Tianjin-Tangshan and mid south of Liaoning regions. Meanwhile, it is vertically manifested in a differentiation regularity of "dense lower regions and sparse higher ones", the main cities and towns (cities, and towns with a population of over 50, 000) concentrate at eastern hilly regions and plains with an elevation of less than 500 meters. By making unremitting efforts under such disadvantageous natural environmental conditions, the Chinese government and Chinese people have achieved rapid development of urbanization and gradual improvement of the habitat environment.

In the 60 years since the foundation of the New China, China's urbanization level has been greatly increased. From 1949 to 2009, the number of cities increased from 132 to 654, and the urbanization level rose from 7.3% to 46.59%. With the rise of the urbanization rate and the enlargement of the urban scale, the urban infrastructural level has also been greatly uplifted, providing powerful support for urban economic development and improvement of the people's living standard. Meanwhile, more and more efforts have been made to control urban environmental pollution, the deterioration trend of the environmental quality has been basically stopped, and the urban living environment has been improved obviously. China has made great achievements in the field of human settlements, and has obtained extensive praise and affirmation from the international society. Since applying for the UN-HABITAT Scroll of Honor Award in1990,China has won the UN Habitat Scroll of Honor Award for 19 times.



Map3.1 Analysis of the Habitat Conditions in China / Source: China's Urban System Planning (2005-2020)

For the purpose of commending the cities, villages, towns and entities that have made prominent achievements and gained distinctive effects of improving the quality of urban and rural environment, enhancing the overall urban functions and creating a good living environment, as well as for the purpose of actively spreading the effective experiences and measures created by all regions in respect of adhering to sustainable development, strengthening comprehensive rectification of the environment and improving the living environment, China's Ministry of Construction established China Habitat Award and China Habitat Best Practice Award with reference to the United Nations Habitat Scroll of Honor and Best Practices Awards, aiming at encouraging the cities to pay high attention to the rebuilding and construction of the living environment, to provide residents with good life and work environment in respect of environmental protection, ecology, air, water quality, greening and traffic, etc., so as to meet the requirements of the Chinese urban residents for prosperity at a higher level, and to uplift the modern images of the cities or even the country. From 2001 when such awards were established up to now, 20 cities in China have won the "China Habitat Award", and 286 projects have won the China Habitat Award for Best Practices.

Box 3.1 Rizhao Municipality, Shandong Province, China - Winner of "UN Habitat Scroll of Honor Award 2009"

Washington, October 5 (Xinhuanet) - UN-HABITAT granted the "UN Habitat Scroll of Honor Award 2009" in Washington on October 5. to Rizhao Municipality, Shandong Province, China for the excellent planning to improve its ecological and living environment.

Today was the 24th "World Habitat Day", and its theme was "Planning Our Urban Future".

United Nations Secretary-General Ban Ki-moon pointed out in his speech that planning was the key to the urban development and that successful planning had to depend on good urban governance. He appealed that the international society should implement effective policies, improve urban planning, and create a more beautiful, greener and sustainable future for the increasingly urbanized earth.

Yang Jun, Chairman of the Standing Committee of Rizhao Municipal People's Congress, said in an interview with a reporter of Xinhua News Agency that Rizhao adhered to the "human-oriented" principle and powerfully implemented the long-term development strategy of "building an ecological city", which enabled Rizhao to make great progress in improving the living and ecological environment of the city.

Picture from: Rizhao Municipality

1 State of Urban Environment

1.1 Partial Improvement of Water Environment

Within the past 30 years after the founding of the New China, the environment pollution problem was not prominent, and the urban water environment quality was good. After the Reform and Opening-up policy was implemented in 1978, the water pollution problem began to arise and became more and more serious with the development of industrialization and urbanization. Especially, the pollution of the rivers passing through cities was more prominent. The main pollutants were ammonia and nitrogen, and aerobic organics and volatile phenol. In recent years, the pollution types are becoming more and more complicated, and emergent water pollution events arise frequently. Meanwhile, the water pollution control work is also gradually stressed and strengthened. In the 1980s, all regions throughout China mainly controlled and comprehensively utilized waste gas, waste water and waste residue. In the 1990s, the State put forward the sustainable development strategy, carried out large-scale pollution control as well as ecological construction and protection projects in major cities, river basins, regions and sea areas. In recent years, the State pays more attention to the environment pollution control, makes great efforts to implement clean production, develops circular economy, adopts the energy conservation and emission reducing policy, makes greater endeavors, and has made obvious achievements in controlling industrial waste gas, waste water and waste residue. As a result, the total amount of main discharged pollutants has been gradually controlled, among which, the discharge amount of COD in 2009 was 27.3% lower than that in 1997. But, the overall pollutant discharge is still at a high level (Figure 3.1). China's Present urban water environment quality takes on a feature of "being partially improved, being not entirely restrained, still facing a severe situation and having increasingly heavier pressure".

In 2009, in the major cities in China, 397 centralized drinking water sources were monitored, including 244 surface water sources and 153 underground water sources. The water quality monitoring result showed that the total water intake amount of major cities was 21.76 billion tons, with 15.88 billion tons of water reaching *Water Quality Standard for Drinking Water Sources,* accounting for 73.0%. The amount of unqualified water was 5.88 billion tons, accounting for 27.0%. There were 3219 water function zones under monitoring and assessment throughout China. The assessment made according to the water quality management objective of the water function zones showed that the annual standard-reaching rate of the water function zones was 42.9%. Specifically, the standard-reaching rate of the Grade I water function zone (excluding zones for development and utilization) was 53.2%, and that of the Grade II water function zone was 36.7%. The monitoring analysis on the underground water of 202 cities in China showed that the quality of underground water was mostly fine or slightly poor. The quality of deep underground water was commonly better than that of the shallow groundwater, and the quality of the water in less-exploited regions was better than that of the more-exploited regions. Generally, the quality of the underground water throughout China almost remained unchanged over the last year.

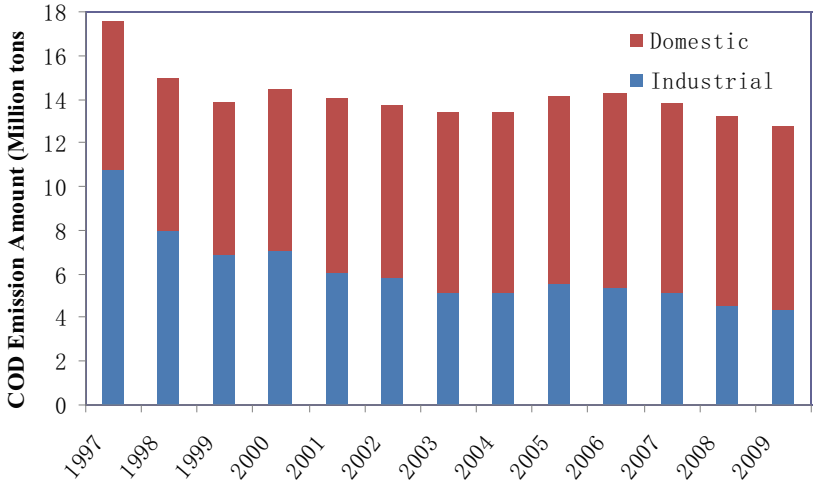


Figure 3.1 COD Emission in China, 1997-2009
Source: State of Environment in China, 1997-2009

Box 3.2 The Chinese Government Has Launched a National Special Program on "Control and Management of Water Pollution".

The National Special Program on "Control and Management of Water Pollution" (hereinafter referred to as the water special program) is one of the 16 major scientific and technical projects set up according to *China National Guideline on Medium- and Long-Term Program for Science and Technology Development (2006-2020)*.

The water special program aims to solve and make breakthroughs in the key technical areas of water pollution control and rectification in China, following the principle of solving primary problems, selecting typical drainage areas for conducting water pollution control and water environment protection and setting up comprehensive models. The project is designed to specially break the bottlenecks of major water pollution in science and technology that limit the economic and social development of China, and to focus on making breakthroughs in a wide spectrum of key technologies and common technologies in water pollution control and rectification, such as industrial pollution source control and rectification, agricultural non-point pollution control and rectification, urban sewage treatment and conversion of it into resources, water quality purification, and ecological restoration, drinking water safety guarantee, and early warning and management in water environment monitoring.

The program is also designed to realize the target of improving water environment quality and drinking water safety in the model areas to effectively improve the management and technical level in water pollution prevention and treatment, through a series of models, such as the comprehensive model of lake eutrophication control and rectification, the technical model of the comprehensive rectification of river water pollution, the technical model of the comprehensive rectification of city water pollution control and water environment, the comprehensive model of drinking water safety guarantee technology, the model of water environment monitoring and early warning technology in drainage areas, and the model of water environment management and policy research.

The water special program is a scientific and technical program which has the largest investment made in the fields of water pollution rectification and drinking water safety since the founding of the People's Republic of China, with the budget totaling more than RMB30.00 billion, and the implementation period from 2008 to 2020.

1.2 General Improvement of Air Quality

For a long time, the urban air pollution in China has mainly been coal smoke pollution, and the main pollutants have been smoke dust and sulfur dioxide. In recent years, automobile exhaust pollution has become increasingly heavier. The features of urban air pollution are as follows: it is heavy in winter and spring but mild in summer and autumn; the smoke dust pollution is heavier in northern cities, while in southern cities the sulfur dioxide pollution is heavier. In 1989, the State Council held the Third National Environmental Protection Conference, and specified 8 environmental management measures in respect of the environmental protection target responsibility system, the environmental impact assessment, "three items of work to be done simultaneously[1]", pollutant discharge fees, etc., which played an important role in controlling air pollution. By the end of 1992, 2750 smoke dust control areas had been built up in 386 cities in China, with a total area of 10468 square kilometers. In 2000, the amended "Law of the People's Republic of China on Control of Air Pollution" was promulgated for implementation. The said law stresses that the air environmental protection work must be incorporated into national economic and social development plans, and proposes that plans should be made to control and gradually mitigate the total amount of major air pollutant emissions in all regions. As a result, obvious achievements have been made in this regard.

In 2009, the sulfur dioxide emission amount in China was 221.44 million tons. Despite of an increase of 41.6% over 1989, it declined by 11% over 2000 (Figure 3.3). At present, the urban air quality in China is generally fine, but the air pollution in some cities is still serious, and the acid rain problem is still prominent. The environmental air quality monitoring carried out on 612 cities in China in 2009 showed that 26 cities (accounting for 4.2%) reached Grade I, 479 cities (accounting for 78.3%) reached Grade II, 99 cities (accounting for 16.2%) reached Grade III, and 8 cities (accounting for 1.3%) even failed to reach Grade III. In the cities at or above the prefecture level in China, the environmental air quality standard- reaching rate was 79.6%, while that in the cities at the county level was 85.6%. Among the 488 monitored cities and counties, there were 258 having acid rain, accounting for 52.9%.

[1] In construction development the environmental protection facilities must be designed, built and put into use simultaneously with the principal project.

Figure 3.2 Sulfur Dioxide Emissions in China, 1989-2009
Source: State of Environment in China, 1989-2009

Box 3.3 The Air Quality in Beijing Has Been Improved for 11 Consecutive Years

In 2009, the blue-sky days in Beijing (the days when the air quality is at or above Grade II[1]) accumulated to 285 days, accounting for 78.1% of the number of days during the whole year, exceeding the objective of blue-sky days in that year by 25 days. The air quality has been improved for 11 consecutive years. In 2009, Beijing achieved the whole year's air quality improvement objective 41 days in advance, and 2009 was the first year since 1999 for Beijing to achieve the whole year's objective. Meanwhile, the number of days at or above Grade II increased apparently, and the number of days of medium and heavy pollution above Grade IV decreased apparently. During the whole year, there were totally 285 blue-sky days, 16.8% higher than the average number during the same period since 2000. There were 5 days of pollution heavier than Grade IV. Among the past ten years, the year 2009 contained the least days of medium and heavy pollution during the same period of each year, decreasing by 18 days over 2000. The concentration of main air pollutants declined apparently, and such pollutants as sulfur dioxide and inhalable particulate matter ranked the lowest among the same periods of the 11 years. According to the preliminary statistics, the concentration of the inhalable particulate matter with complicated source from the air declined to approximately 120 micrograms/ cubic meter, decreasing by about 0.8% over the same period of 2008 when the Olympic Games were held. The emission of sulfur dioxide closely related to coal declined continuously after reaching the national standard, 5.6% less than the same period of the last year. The pollution from these two sources was decreaed by 52.1% and 25.3% respectively over the same period of 2000.

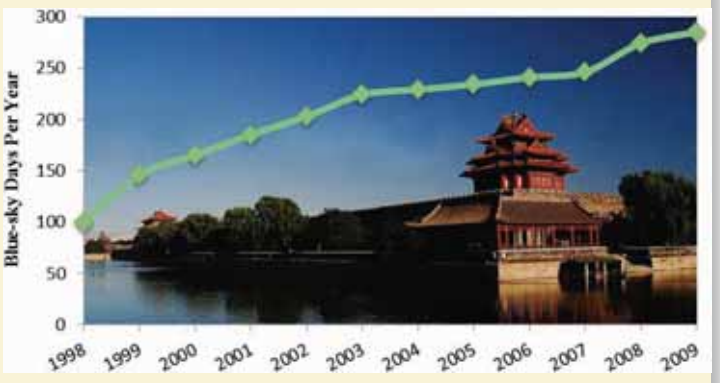


Figure 3.3 Blue Skey Days Per Year in Beijing
Source: Beijing Municipal Environmental Protection Bureau

[1] Grade II of National Environmental Standard of Air (Daily Average):
SO2, 0.15mg/m3; NO2, 0.08mg/m3; NOX, 0.10mg/m3; TSP, 0.30mg/m3; PM10, 0.15mg/m3.

1.3 Effective Control of Noise Pollution

With China's urbanization and motorization, the problem of urban noise pollution is becoming increasingly prominent, but has been effectively controlled. In 1989, the composition of urban noise sources in China was as follows: the road traffic noise accounted for 35%, the domestic noise 38%, and the noises in respect of industry and construction undertaking, etc. 27%. In the same year, the result of road traffic noise monitoring over 70 cities showed that, the major cities whose average equivalent sound level exceeding the standard (70 Dbs) accounted for 94%, and the ordinary cities which went beyond such a standard accounted for 67%. By 1992, 1487 environmental noise standard-reaching areas had been built up in 284 cities in China, with a total area of 2723 square kilometers. The "Law of the People's Republic of China on Control of Environmental Noise Pollution" which came into force on March 1, 1997 played an important role in controlling the environment noise pollution, protecting and improving the living environment and protecting human health.

In the end of 2009, the acoustic environment quality of 74.6% urban areas among the 354 monitored cities was at a good or relatively good level. The road traffic acoustic environment quality of 94.6% of the 334 monitored cities was good or relatively good. Among the 244 monitored cities, the monitored points of various functional areas reached the standard in the day time for 7288 point-times during the whole year, which accounted for 87.1% of the daytime point-times of monitoring; and they reached the standard at night for 5968 point-times, which accounted for 71.3% of the night point-times of monitoring.

1.4 Increased Use Solid Waste

Since the Reform and Opening-up, with the enlargement of the urban scale, the amount of solid wastes has been increasing continuously, and the environmental pollution caused from solid wastes has become more and more serious. In the end of 1989, the amount of industrial solid wastes was 570 million tons, and the accumulative piles of industrial solid wastes amounted to 6.75 billion tons, occupying 55400 hectares of land. For preventing the solid wastes from polluting the environment, the State successively formulated several laws and regulations such as the "Law of the People's Republic of China on Environmental Control of Solid Waste Pollution" (promulgated in 1995 and amended in 2004) and the "Law of the People's Republic of China on Promotion of Clean Production", which played an important role in restraining the rapid growth of solid wastes and in improving the comprehensive utilization rate of solid wastes. The comprehensive utilization rate of solid wastes rose from 45.2% in 1997 up to 67.6% in 2009 (Figure 3.4). In 2009, the national industrial solid wastes amounted to 2.04 billion tons, the discharges amounted to 7.107 million tons, and the comprehensive utilization amount (including the reserves utilized in the previous years), the reserve amount and the disposal amount 1383.486 million tons, 208.886 million tons and 475137000 tons respectively.

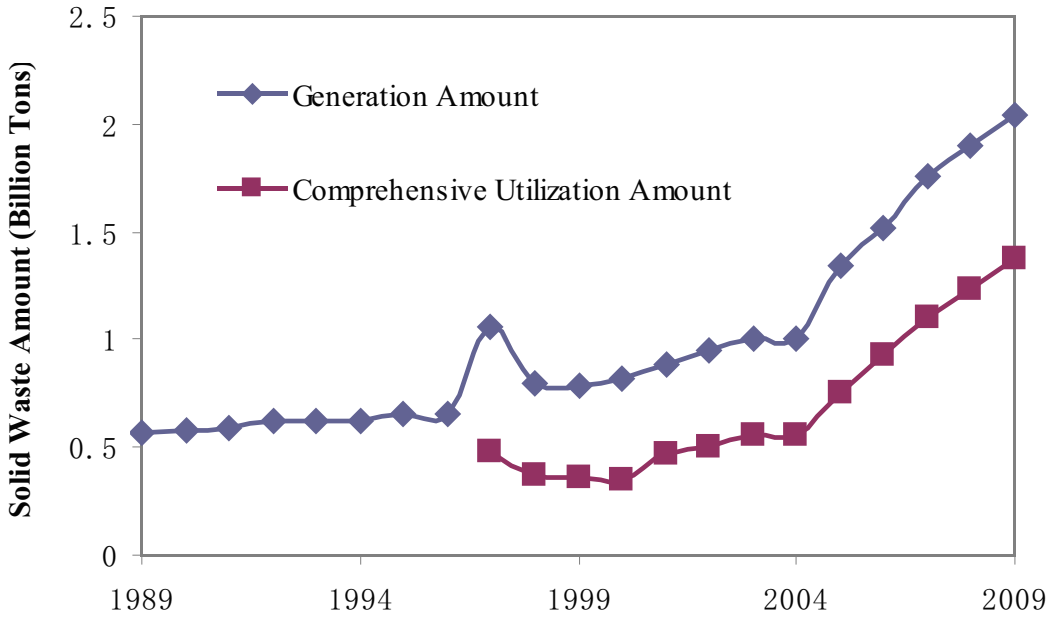


Figure 3.4: The Generation and Utilization of Solid Wastes in China, 1989-2009
Source: State of Environment in China, 1989-2009

2 Urban Water Supply and Water Discharge

2.1 Expansion of Water Supply Capacity

The urban water supply in China has a history of 120 years. The first water supply facility was built up in Lüshun in 1879. In 1949, there were only about 9 million people in 72 cities in China used tap water. The daily water supply capacity was 2.406 million cubic meters, and the length of water supply pipes 6589 kilometers. In 1978, there were 467 cities in China that built up water supply facilities, with a daily water supply capacity of 25.3 million cubic meters, and with the length of water supply pipes being 36000 kilometers. Since the Reform and Opening-up, the water supply undertaking has been developed quickly. By the end of 2008, the urban water supply capacity reached 266 million cubic meters/day, and the length of pipes reached 480,000 kilometers, 110.8 times and 72.8 times respectively of those in the 1950s, as well as 10.5 times and 13.3 times respectively of those in 1978 (Figure 3.5). Meanwhile, the urban water supply capacity has been increasing gradually. It reached 50.008 billion cubic meters in 2008, with an increase of 56 times over 1949. The tap water coverage rate reached 94.73% in 2008. The State began to implement the new "Sanitary Standards for Drinking Water" (GB5749-2006) on July 1, 2007. The water quality control indicators increased from the past 35 items to the present 106 items, meeting the relevant requirements of the World Health Organization (WHO).

The main problems existing at present are as follows: the water source pollution is serious; the Sanitary Standards for Drinking Water are not easy to meet for the water from water plants; the water supply pipes are old and worn out, and the damages, corrosions and scaling of the pipes are easy to impair the water quality; some secondary water supply facilities are simple and are not washed or disinfected in time, and the quality of tap water might be affected by their poor sanitary prevention conditions. Meanwhile, the existing urban water quality monitoring system is not sound, and the water quality supervision ability still needs to be strengthened.

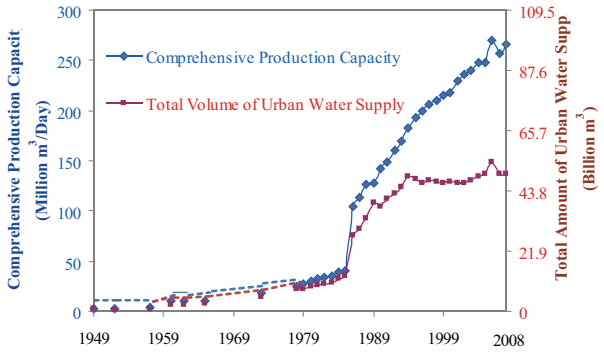


Figure3.5 Urban Water Supply in China, 1949-2008
Source: China Urban Construction Statistics Yearbook, 1999-2008

2.2 Gradual Improvement of Sewage Treatment Facilities

In 1949, there were only 4 small sewage treatment plants in Shanghai and Nanjing, with a daily treatment capacity of approximately 40000 cubic meters. The industrial waste water was seldom treated, and nearly all the waste water was discharged into nearby water bodies. After the founding of the New China, and since the First Five-Year Plan, the State organized the construction of modern water discharge projects in major cities and newly emerging industrial cities. Since the Reform and Opening-up, the problem of urban water pollution has been increasingly stressed, and the construction of urban water discharge facilities has been developed quickly. In 2008, the urban sewage treatment plants in China had a sewage treatment capacity of 81.06 million cubic meters / day, and the urban water discharge pipes in all cities reached 315200 kilometers, 2026.5 times and 52.2 times respectively of those at the beginning of the New China. In 2009, the urban sewage treatment rate in China reached 65.3%, and water recycling rate reached 9.2% (Figure 3.6 and Figure 3.7).

The existing problems are mainly as follows: (1) The coverage of sewage treatment facilities needs to be enlarged, as there are about 23% cities and nearly 71% counties have no sewage treatment plant yet; (2) The sewage collection pipes do not match the sewage treatment plant construction, and the sewage treatment plants operate in a low efficiency; (3) The sludge is not treated harmlessly enough, as most sludge is simply landfilled, piled up or is not treated at all, which is very easy to cause secondary pollution and affect the environmental safety and the health of the general public.

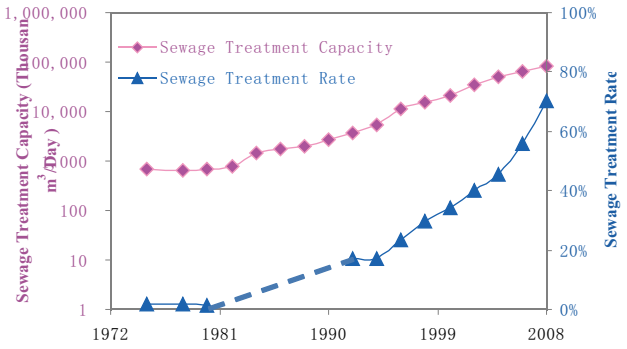


Figure3.6 Sewage Treatment in China, 1978-2008
Source: China Urban Construction Statistics Yearbook, 1999-2008

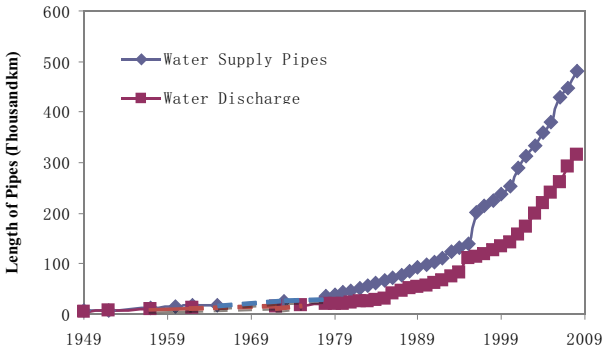


Figure 3.7 Urban Water Supply and Discharge Pipes in China, 1949-2008
Source: China Urban Construction Statistics Yearbook, 1999-2008

2.3 Great Achievements in Water Saving

China's water conservation work started in 1959 when the competent authority of the State first proposed the requirements of "advocating conservation, opposing waste, and saving water". After the Reform and Opening-up policy began to be implemented in 1978, with the rapid economic development, the contradiction of water resource shortage was becoming increasingly prominent, and saving water as a basic national policy was included into the important agenda of government authorities at all levels. Under the guideline of "expanding the sources and reducing consumption", the water conservation work was carried out in cities with great efforts. After entering the 21st century, the State put forward a new strategy which emphasized on "water saving pollution control, development of water resources" to solve the problems of insufficient urban water sources and more serious water pollution.

For more than twenty years, huge achievements have been made in urban water conservation by legal, economic, administrative and technical means. From 1983 to 2008, there were 67.4 billion cubic meters of water saved in cities, the recycling rate of industrial water increased from 18% to 86% (Figure 3.8), and the water consumption for each

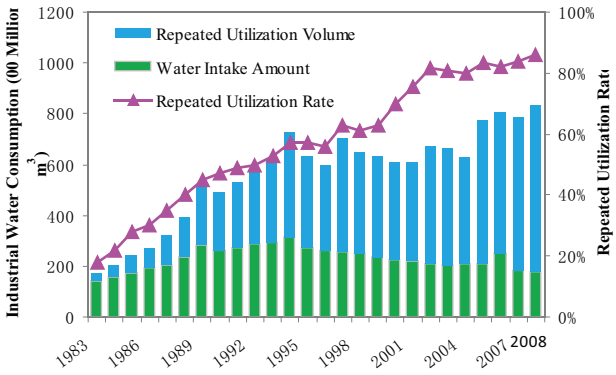


Figure 3.8 Urban Industrial Water Consumption Efficiency in China, 1983-2008
Source: China Urban Construction Statistics Yearbook, 1999-2008

ten thousand Yuan of industrial output decreased from 353 cubic meters to 130 cubic meters. From 1997 when the activity of creating water conservation cities was carried out throughout China to 2008, there were 40 cities that won the title of "Water Conservation City". The effective water conservation played an important role in relieving the contradiction of urban water consumption, as well as in promoting the sustainable utilization of water resources for the sustainable economic and social development.

3 Urban Gas and Heat Supply

People's Park in Haikou
Picture from: City Miracles – 60 Years of Urban Planning and Construction in New China

3.1 Continuous Improvement of Urban Gas Supply Facilities

In the past 60 years, the urban gas supply in China has experienced a development process from single coal gas to the combination of coal gas, liquefied petroleum gas and natural gas. Since the Reform and Opening-up, the main urban gas utilized in the 1980s was mainly from coke ovens and fertilizer plants. At the beginning of the 1990s, the coastal regions in Guangdong first used imported liquefied petroleum gas as the main source of urban gas. Thereafter, from the end of 1990s to the beginning of the 21st century, the natural gas was transmitted "from Shaanxi to Beijing" and "from the western regions to the eastern regions", and China's urban gas industry entered an unprecedented development stage. The State also paid high attention to the exploitation and utilization of natural gas at the level of energy strategy, and provided support in planning, construction, policy and funding for the development of natural gas. The urban gas supply facilities were improved continuously, and the length of gas supply pipes increased from 1900 kilometers in 1957 to 258000 kilometers in 2008, with an increase of 134.8 times. In 2008, China's urban coal gas supply amounted to 35.58 billion cubic meters, the natural gas supply 36.8 billion cubic meters, and the liquefied petroleum gas 13.291 million tons, respectively 20.6 , 53.3 and 68.3 times the amounts in 1978 (Figure 3.9). At presently, gas has been widely used in all areas such as domestic, industry, commerce, automobile sectors. Since gas, especially natural gas, is a high-efficiency, clean and convenient fuel, their wide use brings huge resource and environment benefits, and greatly promote energy conservation and emission reduction.

At present, for the urban gas in China there is still short of a reasonable sales price mechanism due to: (1) The commodity nature of natural gas is not yet commonly recognized by the general public, and the price is hard to be adjusted to the true level. (2) The gas sale fails to truthfully reflect the costs and to embody enterprises' reasonable profit and investment return. (3) It is short of a price interaction mechanism among the upstream, mid-stream and downstream industries, and thus the gas enterprises bear heavy business operation burdens. (4) The price is inflexible, and enterprises have no power to adjust the price.

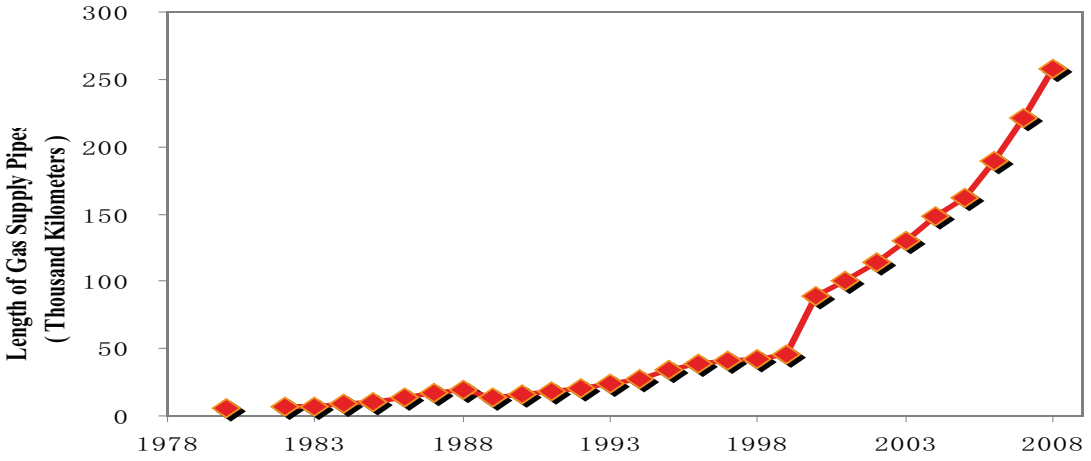


Figure 3.9 Urban Gas Supply Pipeline in China, 1978-2008
Source: China Statistics Yearbook, 1985-2009

3.2 Remarkable Enhancement of Urban Heat Supply Capacity

At the beginning of the New China, with the construction of industrial plants, there were some areas supplied with heat from small boilers in the northeastern regions of China. In the middle of the 1970s, due to the improvement of heat source equipments and technologies, China began to develop the centralized urban heat supply facilities. Since the Reform and Opening-up, the development of heat supply in China's northern regions has entered a period of rapid growth. The heat supply industry has been rapidly developed not only in the northeastern and northwestern regions, but also in North China along with the urban redevelopment. Moreover, the urban heat supply has gone beyond the regions north to the Yellow River, to the provinces and cities in the south of the Yellow River. At Present, China's urban heat supply capacity has been enhanced. The supply coverage has been expanded rapidly. Centralized heat supply has become the principal part of urban heat supply. The heat supply measurement reform is being propelled. Water heating for residents in the northern regions is guaranteed effectively. The energy saving and emission reduction work has been promoted. In 2008, the urban area with central heat supply in China was 3.49 billion square meters, with an increase of 15.6 times over 1990. (Figure 3.10)

Despite of the great enhancement of the heat supply capacity, some heat supply enterprises still face some problems such as: (1) the fee rate is not high, the defaulted heat fees are in a large amount and cannot be remedied; (2) the price of raw materials has risen, making heat supply enterprises difficult in operation; (3) there are no rebuilding funds for updating the old heat supply equipments and pipes, and the heat supply guarantee capacity is insufficient; (4) the operational system of some heat supply enterprises is backward, and there is no competition mechanism.

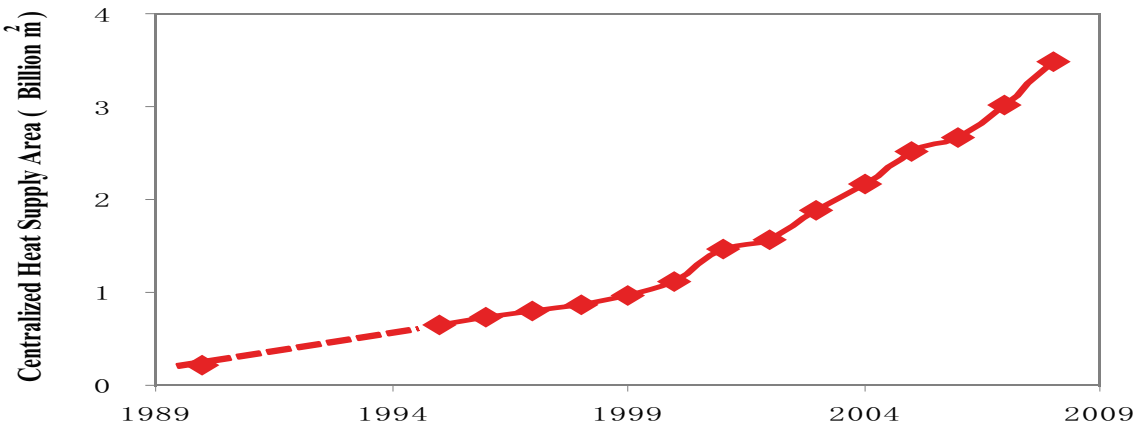


Figure 3.10 Central Heat Supply in China, 1990-2008
Source: China Statistics Yearbook 1989-2009

4 Municipal Roads and Traffic

4.1 Continuous Development of Urban Road Facilities

In 1949, there were only 11,000 kilometers of urban roads in China. With an area of 84.316 million square meters, the roads were narrow and their quality was poor. After the founding of the New China, especially since the Reform and Opening-up, the construction of urban road facilities was improved continuously, Modern road traffic networks composed of urban trunk roads, sub-trunk roads, slow traffic lanes, pedestrian roads, urban round lines and interchanges, etc. were built up. As a result, the urban traffic functions were enhanced rapidly. In 2008, the length of urban roads in China reached 260,000 kilometers, and the road area reached 4.524 billion square meters, with an increase of 22.6 times and 52.9 times respectively in the 1950s (Figure 3.11). More than 230 cities built up special public transport lanes (roads), with the total length of 2357 kilometers. The wide application of new technologies, new processes, new materials and new equipment has greatly improved the quality and carrying capacity of urban roads and bridges.

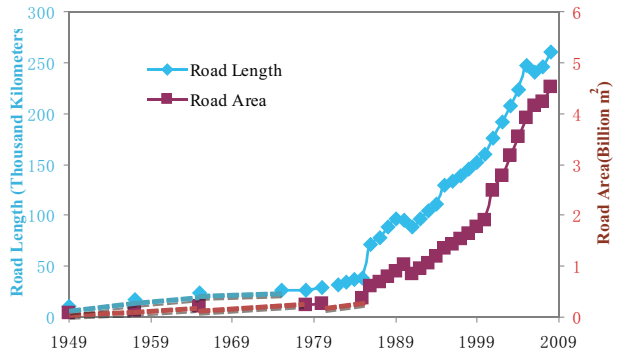


Figure 3.11 Urban Road Development in China, 1949-2008
Source: China Statistics Yearbook, 1985-2009

4.2 Continuous Optimization of Public Transport Facilities

Prior to the founding of the New Chin a, urban public transport facilities were underdeveloped. In large cities such as Beijing and Shanghai, trolley buses and automobiles were seldom seen. In 1949, there are only 27 cities that had transport traffic facilities, with 2299 buses (and trolley buses), and a annual total passenger transport volume of 508 million person-times. In the past 60 years, the urban public transport facilities have been developed rapidly, enabling urban residents to choose various transport means to travel. Buses, subways, city railways and taxies greatly facilitate urban residents in daily transportation. In the end of 2008, there were 367000 city buses and trolley buses in operation, 160 times of those in 1949. Every ten thousand people had 11.1 standard buses, with an increase of 8.9 standard buses over 1990. There were 10 cities, having 29 urban rail traffic lines, with the operation mileage of 776 kilometers, and the annual passenger transport volume 3.374 billion passenger-times (Figure 3.12).

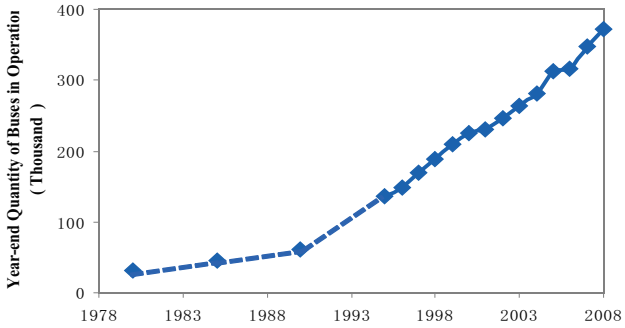


Figure 3.12 Public Transport Vehicles in China, 1978-2008
Source: China Statistics Yearbook 1985-2009

At present, there are also some problems with China's urban transport, which need to be settled urgently. In some cities, the development of private vehicles is overstressed, but the development of public traffic is ignored. In some other cities, pedestrian pavements and bicycle paths are reduced again and again, and the traffic environment for pedestrians and bicycles is deteriorated. In some cities, the various traffic lines are not effectively connected, and there are even adverse competitions, which has to certain extent lowered the overall urban transport efficiency and wasted limited public resources.

Dazhongsi Subway Station in Beijing / Picture from: Zhang Zhiguo

5 Environmental Sanitation

5.1 Continuous Improvement of Garbage Collection System

In the past, the urban environmental sanitation facilities in China lagged behind too much. The cleaning of urban streets and collection and transport of domestic wastes mainly depended on manpower and very simple instruments. After the founding of the New China, the Central Government paid much attention to the improvement of the urban environmental sanitation and the mitigation of the labor intensity of sanitary workers. At present, the urban domestic garbage sweeping, collection and transport system has been formed, and the mechanical level has been uplifted by a large margin. The garbage collection and transport method has been converted from the past open method into the closed method, and the past garbage collection and transport by small vehicles have been directly converted into compression by transit station and then high-efficiency transport by large vehicles. The compressive garbage collection and transport vehicles are widely used, and the mechanical level of urban domestic garbage collection and transport is improved continuously. In 2008, there were totally 76400 urban sanitary vehicles in China, and totally 154.38 million tons of domestic garbage was removed, 14.4 times and 6.2 times respectively of those in 1978.

5.2 Gradual Increase of Garbage Treatment Level

When the urban garbage collection system is improved gradually, the hazard-free garbage treatment level is also improved continuously. By the end of 2008, there were approximately 1.1 million sanitary workers and 509 urban domestic garbage hazard-free treatment facilities in China, including 407 sanitary landfills, 74 incineration plants, 14 composting plants and 14 other treatment facilities. The daily average domestic garbage treatment amount reached 315100 tons, and the hazard-free treatment rate reached 66.76%. The construction and operation of urban garbage treatment facilities are being developed toward a modernized, concentrative and large-scale operation. In recent years, a group of hazard-free domestic waste treatment experiment projects were built including Beijing, Tianjin, Guangzhou, Hangzhou, Qingdao and Shantou.

However, the urban sanitary facility construction and operation level still needs to be improved, and the garbage treatment technology market is not normalized enough. In some places, the improper selection and blind import of technologies cause the operation efficiency to be low or hard to work normally. Small garbage incineration equipments are still in use in some regions. The incineration temperature is low, the smog purification means is simple, and the pollutants such as dioxin are discharged above the allowed standard, which seriously harm the health of the masses. Generally, throughout China, the urban domestic garbage hazard-free treatment rate is still low. Some garbage treatment facilities have not yet reached the hazard-free treatment standard. A great amount of garbage, not disposed off properly, pollutes the water sources, soil and air, and disseminates diseases and harms the human health. There exist great partial of serious safety risks and incidents that should not be ignored.

Zhongguancun Street in Beijing
Picture from: Zhang Zhiguo

6 Parks and Public Green Space

6.1 Continuous Enlargement of Public Green Space

After the founding of the New China, all cities successively established their respective administrative departments for the development of parks and green space step by step according to plans. During the period from 1949 to 1959, turban gardens and public green space was developed and enlarged continuously. By the end of 1959, the total urban green area in China was 128,212 hectares, and there were 509 parks, with a total area of 16,581 hectares. By 1978, the area of urban green space in China declined to 81,735 hectares, and the area of parks was 15,228 hectares. During the 30 years since the Reform and Opening-up, the urban greening undertaking developed fast. In 1992, the State Council promulgated the "Urban Greening Regulation", and the urban greening construction was put on a legal track. In 2001, the State Council held a national urban greening conference, released the "Notice on Strengthening Urban Greening Construction", and determined the urban greening objective for the first ten years of the 21st century. Thereafter, the national urban greening was propelled powerfully. By the end of 2008, the total area of urban green space in China reached 1,747,493 hectares, and the total area of parks reached 218,260 hectares, 21.4 times and 14.3 times respectively of those in 1978. In China, the per capita public green space, greening coverage in built-up areas and vegetation coverage in cities are 9.71 square meters, 33.29% and 37.37% respectively, about 6.2 square meters more, 11.48% and 10.81% higher respectively over 1998 (Figure 3.13).

"To Make Motherland Green", Incription by Mao Zetong at Baiwangshan Forest Park in Beijing
Picture from: Zhang Zhiguo

At present, there are some problems with the urban greening in China mainly in the following aspects: (1) some cities are anxious to achieve quick success on greening construction, and blindly pursue the greening effect of "overnight forest" or "large grassland or landscape"; (2) the concept of "stressing landscape and ignoring ecological function" is not yet changed in the minds of some managers, designers, construction undertakers, residents and the masses, and the natural production capacity of green plants cannot be exerted to the largest extent.

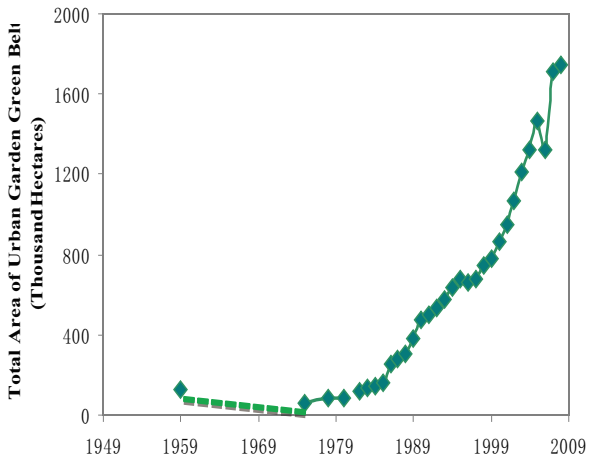


Figure 3.13 Urban Green Space in China, 1949-2008
Source: China Statistics Yearbook 1985-2009

6.2 Remarkable Improvement of Park Development Quality

When all regions are carrying out urban greening in large scales, more attention should be paid on the scientific garden construction, rational planning and design and diversity of plant combination. The gardens should be improved continuously, while foreign garden arts, ecological landscape concepts and different plants should be brought into the development of gardens in China and integrated with local culture and conditions.

By the end of 2008, China had 139 national garden cities, 7 garden downtowns, 40 garden counties, 10 garden towns and 11 national experiment ecological garden cities. The total area of the urban green space in China was 3.6 billion hectares, including 1.208 million hectares of parks and gardens and 1.356 million hectares of public green space in the built areas. When more and more efforts are made for urban greening construction and the urban greening qualities are raised, many cities are going to build a group of high-level and high-quality parks and green space according to the local territorial, historic and cultural features.

Humble Administrator's Garden in Suzhou
Picture from: City Miracles – 60 Years of Urban Planning and Construction in New China

7 Responding to Climate Changes

7.1 Strengthening Legal Restrictions and Policy Guidance

China pays high attention to climate changes in the process of development, and has made unremitting efforts and active contributions for responding to climate changes by starting from the long and fundamental benefits of the Chinese people and the mankind. China is the first developing country who has formulated and implemented the "National Program on Responding to Climate Changes". It has also successively formulated and amended a series of laws and regulations such as the Energy Conservation Law, the Renewable Energy Law, the Circular Economy Promotion Law, the Clean Production Promotion Law, the Forest Law, the Grassland Law and the Regulation on Energy Conservation in Civil Buildings. All this shows that China regards the laws and regulations as important means to respond to climate changes.

China is a country that made the greatest efforts in energy conservation and emission reduction in recent years. It improves taxation system continuously, propels the price reform of resource products actively, and promotes the establishment of a price formation mechanism that can fully reflect the market supply and demands, resource scarcity and environmental damage costs. It fully implements the Ten Major Energy Conservation Projects and the Thousand-Enterprise Energy Conservation Plan, and takes energy conservation actions in the key areas of industry, traffic and construction, etc. It deeply propels the experiment of circular economy, endeavors to extend energy-conservation and environmental-protection automobiles, and promotes energy-conservation products and projects in favorable to consumers. It also encourages the elimination of high-consumption and high-pollution backward production facilities.

China is a country where new energies and renewable energies are increased most rapidly. On the basis of protecting ecosystems, it develops hydropower orderly, develops nuclear power actively, and encourages and supports rural and remote regions and the regions with suitable conditions to develop bio-energy, solar energy, geo-thermal energy, wind energy and other similar new-type renewable energies. China is the country that has the largest area of afforestation in the world, continuously restores cultivated lands to forests, plants trees and cultivates forests at large scales, and makes great efforts to increase forest carbon sinks.

Box 3.4 China's "Solar Roofs Plan"

On March 26, 2009, the Ministry of Public Finance and the Ministry of Housing and Urban-Rural Development jointly released the "Implementation Opinions on Promoting the Application of Solar Photoelectric Buildings" and the "Interim Measures on the Administration of the Fiscal Subsidy Funds for Application of Solar Photoelectric Buildings". For the purpose of effectively addressing the insufficient application of optoelectronic products in China, China's "Solar Roofs Plan" was implemented by adopting demonstration projects at the beginning of the development process, accelerated to promote the use of optoelectronics in urban-rural construction, and meanwhile providing subsidy to the demonstration projects of qualified solar photoelectric buildings at the rate of 20 Yuan/Wp (the amount of such subsidy can cover 30% or more of the costs). China's "Solar Roofs Plan" mainly includes three aspects: (1) promoting exemplary development of optoelectronic buildings, and initiating the domestic market; (2) highlighting the key areas, and guaranteeing the effects of the demonstration project; (3) enlarging the exemplary effects, and creating conditions for large-scale dissemination.

The concept of "Solar Roofs Plan" is to start from energy conservation and environmental protection, install solar systems on roofs or other possible parts of buildings, and make full use of solar energy to get electric power and heat.

7.2 Exploring Ways for Low Carbon Urban Development

In July 2010, the National Development and Reform Commission determined to carry out the low carbon experiment work in five provinces (namely, Guangdong, Liaoning, Hubei, Shaanxi, Yunnan) and eight cities (namely, Tianjin, Chongqing, Shenzhen, Xiamen, Hangzhou, Nanchang, Guiyang and Baoding). The specific tasks covered the following five aspects: compiling a low carbon development planning, making ancillary policies that support low carbon development, accelerating the development of an industrial system with low carbon emission, setting up a greenhouse gas emission data statistics and management system, and actively advocating low-carbon green living and consumption modes. At present, nearly 100 cities have joined the initiative to become "Low Carbon cities". China is becoming one of the countries that actively explore ways to build low carbon cities.

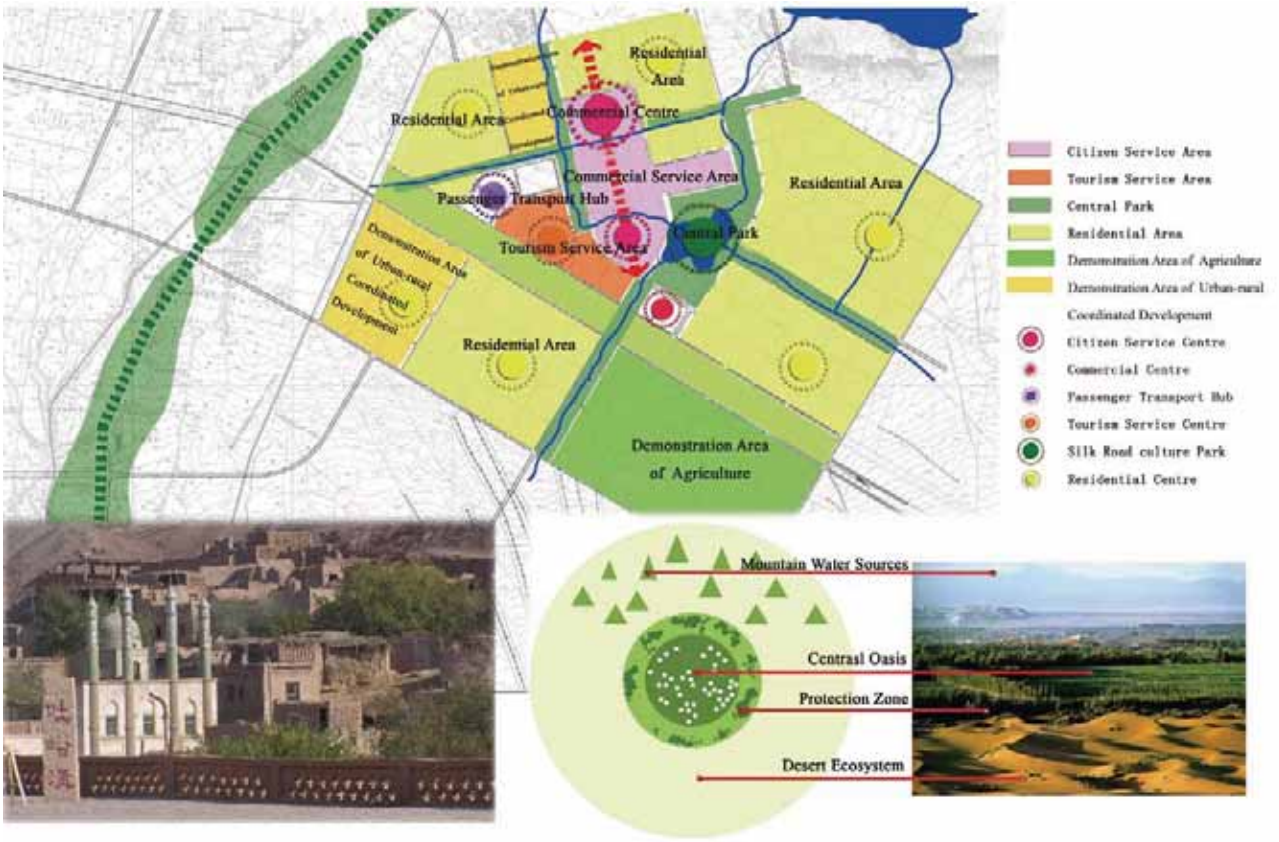
In low carbon city development, the energy-conservation buildings, low-carbon living spaces and urban public transport are highly stressed and rapidly developed in China. In the field of public transport, the rapid rail transit system is developed quickly in some big cities, and has become an important carrier of urban transport. Some other cities are turning to focus on "zero" emission bicycles and low-emission means of transport such as dual-fuel automobiles, electric vehicles and solar cars, so as to attain low-carbon operation. For the purpose of enhancing people's consciousness of energy conservation and emission reduction, and advocating green trips, all cities have organized the "Car-Free Day" publicity activities in September each year since 2005 as per the proposal of the Ministry of Construction.

In respect of energy conservation of buildings, there is a stock of more than 40 billion square meters of buildings in China. About 95% of them are high-energy-consumption buildings. The large public buildings account about 4 % of the total areas of buildings in China. But these buildings, highly intensive in energy consumption, account for 22% of the total energy consumption of urban buildings in China. The energy consumption of buildings has accounted for 27.5% of the ultimate energy consumption of the whole country. For promoting energy conservation of buildings, the energy conservation standards should be regulated for new buildings on one hand. On the other, energy conservation and emission reduction for the existing buildings should be pursued.

Box 3.5 Planning of Turpan New Area in Xinjiang

Turpan New Area is located at the Gobi Desert to the east of Turpan City, about 5 kilometers from the old downtown. The Area has a total planned area of approximately 8.93 square kilometers. The Area, though short of water resource, has rich solar energy, wind energy and other renewable energy resources. Five major concepts are identified in Turpan New Area's planning: ecologically sound distribution of urban space; livable and healthy residential areas; green transport and public transport first; supporting systems for water and energy conservation; cities and buildings with regional and cultural characteristics. In the framework of the planning , following aspects are particularly stressed: (1) the utilization rate of water, and the recycling rate of sewage resources; (2) the proportion of clean energies among the energy structure; (3) moderate energy conservation indices of buildings; (4) moderate indoor comfort indices; (5) suitable greening indices.

The energy conservation and water conservation technologies adopted in the Area mainly include: building new energy-conservation areas, intensifying energy conservation measures, particularly strengthening the passive energy conservation measures such as heat preservation and insulation of buildings, natural ventilation and lighting, and improving the energy utilization efficiency; developing wind power generation based on the rich wind energy and solar energy in Turpan; using the Karez Well low-temperature water and hot dry air for refrigeration; disseminating the use of water conservation devices and equipment, so as to raise the recycling rate of urban water; building up dispersive sewage treatment systems, and using recycled water for irrigation of nearby farmlands and ecological green areas.



7.3 International Exchanges and Technological Cooperation

Responding to climate changes is a common duty of the whole world. China has actively participated in the international exchanges and technological cooperation on global environment change, such as the four major international technological research programs under the framework of the Earth System Science Partnership (ESSP), i.e., the World Climate Research Program (WCRP), the International Geo-sphere-Biosphere Program (IGBP), the International Human Dimensions Program on Global Environmental Change (IHDP) and DIVERSITAS, as well as the intergovernmental Group on Earth Observations (GEO) and the observation plan of the Global Climate Observing System (GCOS). China has also carried out basic research on global changes with Chinese characteristics and global significance.

In respect of urban energy conservation, China has widely cooperated with international organizations and countries such as the United Nations Development Program, the World Bank's Global Environment Facility, Asian Development Bank, Germany, France and Singapore. The cooperation projects include: the "Project of China's Heat Supply Reform and Energy Conservation of Buildings" between China and the World Bank's Global Environment Facility (GEF); the technical cooperation between China and Germany, on the "Project of China's Energy Efficiency in Existing Buildings"; the cooperation with the United Nations Development Program (GEF), on the "Project of China's Terminal Energy Efficiency" (the part of building package); the China-France "Project on Energy Efficiency Improvement and Sustainable Development in China's Dwelling House Area"; the China-Netherland "Example Project on Sustainable Buildings"; the China-Germany technologically cooperative "Project on China's Urban Sustainable Development"; the China-Singapore "Communication and Cooperation Project on Urban Environment Control and Comprehensive Utilization of Water Resources"; and the Asian Development Bank's technical aid project, on the "Research on the Renewable Utilization Policy on China's Urban Sewage/Sludge Resources". The international cooperation and exchange have played an important role to share experiences, technologies, funds, and helped improve the energy conservation and emission reduction capacity and level of the cities in China.

Box 3.6 China-Germany Technical Cooperation- China's Energy Efficiency in Existing Buildings

The technical cooperation project "China's Energy Efficiency in Existing Buildings", which was jointly approved by Chinese and German governments, was formally launched in November 2005, and the implementation duration of the project was 5 years. The Chinese implementing agency was the Department of Building Energy Conservation and Technology of the Ministry of Housing and Urban-Rural Development, while the German Federal Ministry for Economic Cooperation and Development entrusted German Technical Cooperation Company to implement the project on behalf of the German government.

The main task of the project is, through demonstration projects, to import advanced construction energy efficiency programs and concepts from Germany, to develop the concepts, technologies and financing methods of energy efficiency in existing buildings suitable for the northern regions of China in light of the actual situation of China, to facilitate the domestic heat supply system reform, to promote the China-Germany industrial cooperation on construction energy conservation products, and to make contributions to the improvement of the living environment, reduction of the energy consumption in buildings, saving energy and resources, and reduction environmental pollution and greenhouse gas emission.

The overall objective of the Project is that the concept and standards of the energy efficiency in existing buildings in northern regions of China will be verified, and disseminated with the help of the Department of Building Energy Conservation and Technology of the Ministry of Housing and Urban-Rural Development of China. The assessment indicators will cover following three aspects: (1) By 2010, when the average indoor temperature of residential buildings of energy efficiency during the heating season is raised to 18°C, the heating energy consumption will be reduced by more than 30%; (2) By 2009, the relevant standards and technical programs of energy conservation in the existing residential buildings in northern regions of China will be recognized and spread by the Development of Building Energy Conservation and Technology of the Ministry of Housing and Urban-Rural Development of China; (3) By 2010, the experimental cities of heat supply system reform in northern regions of China will be able to adopt the standards and methods developed with the support of the project.

Source: China-Germany Technical Cooperation – the Office for the Project of China's Energy Efficiency in Existing Buildings
http://www.eeeb.org.cn/

Chapter four

04

Social Development and Urban Services in China

In October 2007, the Communist Party of China convened the 17th National Congress, which further elaborated the people-oriented, fully coordinated and sustainable scientific development concept, and described the grand blueprint of continuously building a well-off society and accelerating the socialist modernization under the conditions of a new era. The development goals of "all our people enjoy their rights to education, employment, medical and old-age care, and housing" as mentioned in the report fully reflects the plain expectation of "Peaceful Life and Secure Country" held by 1.3 billion Chinese people. From rural to urban, from economic area to other areas, the vibrant socialist market economic system has greatly stimulated the enthusiasm of hundreds of millions of people. The urban and rural areas have realized common prosperity, the people's income have increased considerably and the properties of families have also increased generally. The minimum substance security system has been preliminarily established and the basic livelihood of the poor safeguarded. The residents' consumption structure has been optimized, the level of basic necessities has been raised and the available public services have been improved markedly. The social development has been carried out in all spheres. The various types and levels of education have been developed rapidly, and the compulsory education in rural areas has been fully realized. There have been more job opportunities. The development of social security system has been further intensified. The social management has been gradually improved, the entire society has been stable and the people have been living in harmony.

1 Urban Social Security and Assistance

Urban social security means that the State, through legislation, actively mobilizes the social resources to ensure the citizens without income or with lower income or suffering accidents to maintain the living conditions, ensure the basic living conditions of the urban workers will not be affected when they are old, unemployed, ill, injured in work or child-bearing. The level of public welfare and quality of people's life will be gradually improved on the basis of the economic and social development.. In accordance with Article 45 of the Constitution of the People's Republic of China, Citizens of the People's Republic of China have the right to material assistance from the state and society when they are old, ill or disabled. The state develops the social insurance, subsistence allowance and medical and health services that are required to enable citizens to enjoy this right. The state and society ensure the livelihood of disabled members of the armed forces, provide pensions to the families of martyrs and give preferential treatment to the families of military personnel. The state and society help make arrangements for the work, livelihood and education of the blind, deaf-mute and other handicapped citizens."

1.1 Continuous Development of Social Assistance

Social assistance is a part of the social security system, which means that the state and society, in accordance with the policy and the law, provide various assistances to the persons who have difficulty in basic material life or can not maintain the minimum living standard by themselves due to different causes (natural, social or personal).

At the end of 2009, there were 11.411 million households and 23.456 million urban residents that received the minimum subsistence allowance. The total expenditure of minimum subsistence allowance at all levels of fiscal reached 48.21 billion Yuan throughout the year, of which the subsidy, from the central fiscal budget was 35.91 billion Yuan (of which, the subsidies of 3.42 billion Yuan was paid during the Spring Festival), accounting for 74.5% of all expenditures of the minimum subsistence allowance. Among the persons granted with the urban minimum subsistence allowance, 790,000 persons were in-service employees, accounting for 3.4%; 4.322 million persons were temporary workers, accounting for 18.4%; 3.335 million persons were seniors, accounting for 14.2%; 5.102 million persons were the registered unemployed persons, accounting for 21.8%; 4.109 million persons were the unregistered unemployed persons, accounting for 17.5%; 3.691 million persons were students, accounting for 15.7%; and 2.107 million persons were juniors, accounting for 9.0%.

In 2009, the national urban minimum subsistence allowance standard per month was 227.75 Yuan on average, and the national urban minimum subsistence allowance level per month per capita was 172 Yuan. The urban minimum subsistence allowance consolidated the security of those who were eligible to the allowance under the dynamic management.

At the same time, the rural minimum subsistence allowance was also steadily moving to the security system as the cities did. At the end of 2009, there were 22.917 million households and 47.6 million persons who received the rural subsistence allowance. The total expenditure of rural

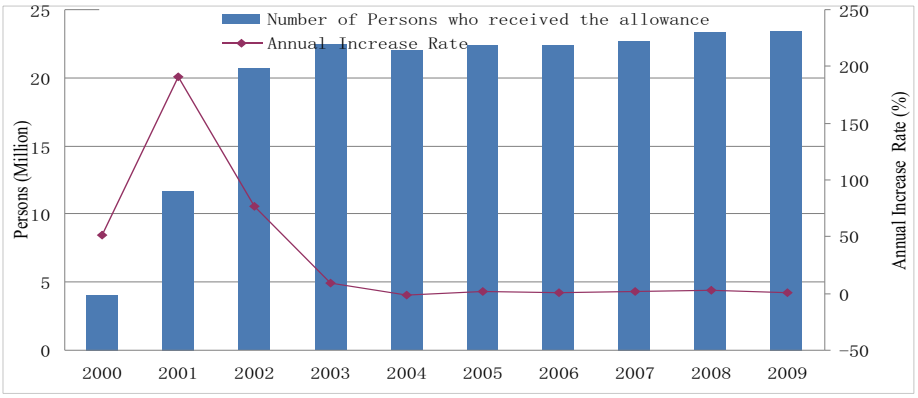


Figure 4.1 Urban Minimum subsistence allowance, 2000-2009

subsistence allowance reached 36.3 billion Yuan throughout the year, of which the central fiscal budget provided 25.51 billion Yuan, accounting for 70.4% of all expenditures of the minimum subsistence allowance nationwide. In 2009, the national rural minimum subsistence allowance standard was 100.84 Yuan per capita per month, and the national rural minimum subsistence allowance level per month per capita was 68 Yuan.

1.2 Effective Work in Emergency Relief

China is a country susceptible to natural disasters, and so the tasks of relief are extremely heavy. To strengthen the construction of the emergency relief system is a critical matter related to the national economic and social development and the interests of the massive people, is the important content of building a harmonious socialist society, and the important expression of the principles of people-oriented, governing for the people and fully performing the government functions by the governments at all levels. In recent years, the construction of the domestic emergency relief system has achieved significant progress, which has successfully responded to a number of serious natural disasters and has achieved significant results. But the system has some defects, such as incomplete structure, deficient function and weak support capacity.

Under the guidance of the central government, the construction of the national emergency relief system insists on the principles of "government-led, hierarchical management, community mutual aid, self-help through production", regards protection of the people's lives and properties and basic living rights and interests as the starting point and ultimate goal, regards the improvement of the emergency relief capacity as the core, makes integrated use of administrative, legal, technological, marketing and other means, co-ordinates the relief works before, during and after the disasters, fully enhances the comprehensive capacity of prevention and emergency response to natural disasters, effectively protects the safety of the people's lives and properties, and promotes the comprehensive, coordinated and sustainable development of economy and society.

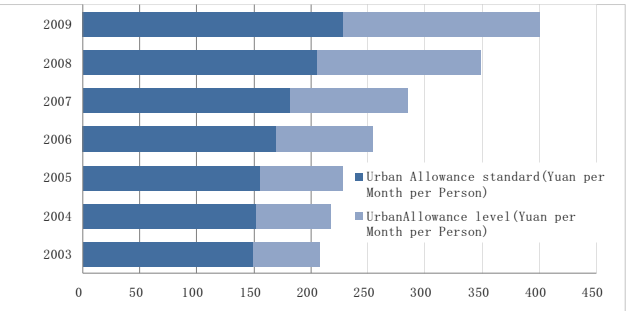


Figure 4.2 The Standard and Level of Urban Minimum Subsistence Allowance, 2003-2009

In 2009, there were approximately 479 million persons (times) that became victims in various natural disasters, 1,528 persons who were killed and missing due to disasters. A total of 47,213,700 hectares of crops were affected by disasters, an increase of 18.1% compared to the figure of the previous year. A total of 4,917,500 hectares of crops had no harvest, an increase of 22.0% compared to the figure of the previous year. There were 838,000 houses that were damaged. The direct financial loss reached 252.37 billion Yuan.

Throughout 2009, 65.53 million disaster victims received the relief; over 7 million persons were relocated in emergency; 17.45 billion Yuan of central disaster relief funds were appropriated; and 44,600 tents were allocated for the disaster relief. About 93.4% of rural houses destroyed in the Wenchuan Earthquake were reconstructed, and the management of the donation funds for disaster relief in the Wenchuan Earthquake were effectively strengthened and such funds were positively used to support the implementation of corresponding tasks. The Government added the consolation money for the people killed by the disasters, and raised the standard of subsidy for the reconstruction of the rural houses destroyed by the disasters. The high and new technologies, such as satellite remote sensing, were applied in disaster monitoring and evaluation. The disaster management information system basically covered all provinces, municipalities and counties. The central government promoted the establishment of the national "Disaster Prevention and Mitigation Day" and carried out some relevant activities, and promoted the establishment of the national disaster mitigation model communities. The capacity of disaster prevention and mitigation was enhanced markedly.

1.3 Breakthrough in Building Various Adoption Institutions

At the end of 2009, there were 40,250 various adoption social welfare institutions nationwide, with 2.993 million beds and 2.362 million adopted persons. With respect to the persons resided at the institutions, there were 127,000 persons with preferential support, 1.835 million persons "without child, family and source of subsistence", and 400,000 persons at their own expenses. If classified by age, there were 2.071 million old persons, 175,000 young adults and 115,000 children. If classified by nature,; there were 1.864 million persons by self-care (complete self-care), 226,000 persons by involved care (semi-self-care) and 271,000 persons by full support (no self-care ability).

1.3.1 Rapid Development of Services for the Elderly

The appropriate general services for the elderly, combined with the financial support and service assurance, have been further improved. Certain counties (and municipalities) in China have established the subsistence subsidy system for senior citizens, and the structure of services for the elderly based on the families, communities and institutions has been formed basically. Some trials on the construction of the basic services system for the elderly have been conducted. Some national standards, such as Basic Norms of Institutional Services for the Elderly and the Basic Norms of Household Services for the Elderly, have been formulated. The Standard Regarding the Construction of the Nursing Institutions for the Elderly has been promulgated.

At the end of 2009, there were 38,060 various elderly social welfare institutions nationwide, with 2.662 million beds and 2.109 million adopted persons. Among those institutions, there were 5,291 urban elderly nursing institutions, with 493,000 beds and 323,000 adopted elderly persons at the end of the year; 31,286 rural elderly nursing institutions, with 2.088 million beds and 1.73 million adopted elderly persons; 1,401 homes for disabled veterans, with 67,000 beds and 46,000 adopted elderly persons; 47 rehabilitation hospitals for honorable veterans, with 8,000 beds and 4,000 adopted elderly persons; and 35 sanatoriums for demobilized veterans, with 6,000 beds and 4,000 adopted elderly persons at the end of the year.

1.3.2 Major Progress in Child Welfare

Social welfare institutions are the charitable bodies set up by the Chinese government, who are responsible for adoption of orphans whose parents are dead and their relatives are unable to bring them up, as well as the abandoned babies and children whose parents can not be found through the investigation of the pubic security departments. Children in the welfare institutions can enjoy the state welfare benefits, and are under the care and custody of the welfare institutions.

In order to properly look after the orphans and

abandoned babies, the has government formulated and implemented the minimum care standard for the orphans scattered in the communities and the children in the welfare institutions, and invested lots of funds in establishing welfare institutions and improving the conditions and facilities. Welfare institutions combine the support, education and medical treatment and give elaborate care to the orphans, disabled children and abandoned babies, so that they may enjoy the warmth and love like normal children and live and grow up happily in the welfare institutions.

At the end of 2009, there were 115,000 children adopted by various adoption institutions nationwide. There were 303 independent child welfare institutions with 44,000 beds and 116 vagrant children aid and protection centers with 4,000 beds. Throughout 2009, there were 145,000 urban vagrant and begging children (and times) without subsistence source received the aid.

1.3.3 Intensified Development of Retardation and Mental Illness Service Institutions

The Ministry of Civil Affairs, the National Development and Reform Commission and the Ministry of Health have jointly formulated the Construction and Development Planning for the Mental Health System, which requests the local governments to make preparation for the special investments by the central government for the development of mental health professional institutions. There are 110 mental health-care clinics that have been included in the construction planning of the national mental health system. At the end of 2009, there were 266 retardation and mental illness service institutions managed by the civil affairs administrations nationwide, of which, there were 177 community welfare hospitals (mental illness clinics) with 39,000 beds and 33,000 adopted patients at the end of the year.

1.4 Healthy Development of Aging Undertakings

At the end of 2009, there were 113.09 million persons at or above the age of 65 nationwide, accounting for 8.5% of the total population of China. There were 167.14 million persons at or above the age of 60 nationwide, accounting for 12.5% of the total population. In order to respond to the growing aging population in China and satisfy the increasing demand for elderly services, the elderly service departments took active and effective measures to expand the extent and scope of services for the aging population and solve the problems existing in the services for the elderly in the urban and rural areas. At the end of 2009, there were 19,909 elderly legal aid centers nationwide, 136,000 elderly right protection and coordination organizations, 59,543 elderly schools with 5.415 million students, and 329,000 elderly entertainment rooms in different types. There were 433,000 times of correspondences and visits received throughout the year, which effectively protected the legal rights and interests of the aging population.

2 Urban Health Care

2.1 Urban Health Care Security System

Medical security system is not only an important part of the social security system which is a safety net of the public, stabilizer of the society, and main subscriber of the medical costs, but also an important part of the medical health system which is on one of the important part of the urban and rural medical systems in China.

Since the reform and opening-up policy was introduced, especially since the 3rd Plenum of the 14th CPC National Congress, the central government has made series of major decisions and actively promoted the reform of basic medical insurance system. The trial reform of employees' basic medical insurance started in Zhenjiang of Jiangsu Province and Jiujiang of Jiangxi Province in 1994. The national reform of urban employees' basic medical insurance system was launched at the end of 1998, which changed the public health care system into a social medial insurance system. The urban medical aid system was established in 2005, which granted aid to the people who receive minimum subsistence allowance or have other difficulties. The trial of basic medical insurance for urban residents started in 2007, which included students, children and the elderly and other non-employed persons into the coverage of the medical insurance. The medical insurance system for urban residents was implemented nationwide in 2009.

The framework of medical security system with the Chinese characteristics has been formed basically through the reform and research in many years. The urban employees basic medical insurance, the urban residents basic medical insurance and the new-type rural cooperation medical service have covered the urban employed and non-employed people,, rural people, and the people with difficulties in urban and rural areas. They are the major components of the medical security system in China. The basic medical insurance system is the main player of the medical security system. Meanwhile, the urban and rural medical aid and social charity donation and other relevant systems provide aid to the poor people for their participation in the insurance and for their payment of the personal contributions, creating a possibility of minimum social secure. The higher and variety of medical demands of the people are satisfied through the supplementary medical insurance and commercial health insurance.

In 2009, the urban residents basic medical insurance was implemented in all cities nationwide, and the problem of insurance participation by the retirees of the close-down and bankrupt state-owned enterprises was being settled in high speed. At the end of September 2009, there were 363 million urban employees and urban residents participating in the medical insurance nationwide, an increase of 44.78 million persons compared to the figure at the end of 2008. The urban residents' basic medical insurance has been launched throughout in China.

The fiscal funds at all levels paid for the urban medical aid throughout the year reached RMB 4.12 billion Yuan, of which, the funds for supporting the participation in the medical insurance appropriated by the civil affairs departments reached 580 million Yuan, and the funds for the major illness medical aid reached 3.14 billion Yuan. There were 15.063 million person/times received the aid accumulatively, of which, there were 10.959 million person/times participated in the medical insurance with the financial support from the civil affairs departments, at an average of 53.5 Yuan per capita. There were 4.104 million person/times received the urban major illness medical aid with the financial support from the civil affairs departments, at an average of 764.7 Yuan per capita.

2.2 Health Service Institutions

At the end of 2009, there were 5.22 million health technicians nationwide as estimated, of which 2.16 million were practicing (assistant) physicians and 1.74 million certified nurses. Compared to the figure of the previous year, there was an increase of 190,000 health technicians (3.8%), 80,000 practicing (assistant) physicians and 90,000 certified nurses. The number of practicing (assistant) physicians per thousand persons in China wss increased from 1.58 persons in 2008 to 1.62 persons in 2009, while the number of certified nurses per thousand persons was increased from 1.25 persons to 1.30 persons.

At the end of 2009, there were 4.27 million beds in the medical institutions nationwide as estimated, of which 3.963 million beds were in hospitals and clinics, accounting for 93% of the national total. Compared to the figure of the previous year, there was an increase of 234,000 beds in the medical institutions, of which there was an increase of 218,000 beds in hospitals and clinics. The number of beds in medical institutions per thousand persons in China was

At 00:02 on January 6, 2005, a boy with 3,660 grams and 52 centimeters was born in Beijing Maternity Hospital. With the birth of this boy, the population of China reached 1.3 billion.

increased from 3.05 beds in 2008 to 3.20 beds in 2009, while the number of beds in hospitals and clinics per thousand persons was increased from 2.83 beds in 2008 to 2.96 beds in 2009.

At the end of November 2009, 4,434 communities among all 6,705 urban communities in the cities nationwide (accounting for 66% of the national total) established their community health-care service centers. There were 168,000 health-care professionals, including 138,000 health-care technicians, at an average of 38 health-care professionals per center. The scale communities and residents committees typically established a community health-care service station. At the end of November 2009, there were 22,000 community health-care service stations nationwide, with 75,000 health-care professionals as estimated, at an average of 3 health-care professionals per station. Compared to the figure of the previous year, the number of community health-care service centers (stations) increased by 1,895 and the number of health-care professionals increased about 24,000.

3 Education Development

Education is a foundation for planning the development of the next one hundred years. Education is the cornerstone of a nation's prosperity and social progress, and the fundamental way to improve the quality of nationals and promote the comprehensive development of the people. It carries the expectation of hundreds of millions of families for a better life. To strengthened education is fundamental to a powerful country. To put priority on education and improve the modernization level of education are of decisive significance for the achievement of the goal of building a well-off society and building a prosperous, democratic, civilized and harmonious modern socialist country in China.

The education of new China was developed on an almost scratch basis. In 1949, 80% of the population in China was illiterate, and only 20% and 6% of the population entered primary school and secondary school respectively. There were only 117,000 students studying at universities. Through the unremitting efforts in the past 60 years, especially with the reform and open-up policy implemented in the last thirty years, the education in China has undergone enormous changes, and made remarkable historic achievements.

3.1 Full Realization of Urban and Rural Compulsory Education

After the founding of new China, the central government proposed to expand education and improve the quality of the whole nation. In the 1980s, it further decided to implement the nine-year compulsory education. Through unremitting efforts, the goal of general implementation of nine-year compulsory education and general elimination of illiteracy among young adults was realized at the end of the last century. After entering the new century, the focus was put on strengthening and developing the education in rural areas and fully including the compulsory education into the coverage of the fiscal budgets. Therefore, the compulsory education reached a new stage of consolidation, improvement and universal coverage. In 2009, the net rate of entry into primary school nationwide reached 99.4% and the gross rate of entry into secondary school reached 99.0%, while the rate of illiteracy among young adults reduced to below 3.58%.

3.2 General Development of Higher Education

In 2009, there were 2,689 universities, colleges and adult colleges nationwide, 6.395 million junior college students enrolled and 21.447 million students at college. At present, there are 29.79 million students at various high education institutions nationwide, with the gross entry rate of 24.2%. Realizing the popularity of higher education is another historic leap in the history of the development of education in China after the popularity of compulsory education.

3.3 Rapid Development of Vocational Education

Since the reform and opening-up started in the late 1970s, especially the beginning of the new century, the development of vocational education has been placed on a more prominent position. Adhering to the principle of being oriented to everyone to be educated, the entire society and the employment, the secondary vocational education and senior vocational education have developed dramatically, generating the capacity of training skilled persons in a large scale. In 2008, the total number of enrolled students in secondary and senior vocational education reached 11 million, and the number of students at school exceeded 30 million nationwide. The structure of education system in China has changed significantly. Meanwhile, the continuing education and adult education focusing on updating knowledge and enhancing skills have been developed rapidly, basically satisfying the diverse learning needs of the people.

3.4 Promotion of Equality in Education

To let everyone have equitable access to education is a fundamental right of citizens granted by the Constitution and is the relentless pursuit for the education in China. Great achievements have been made in the implementation of the policies to progressively introduce the compulsory education in urban and rural areas, establish and improve the financial assistance system for the students from poor families, grant preferential policies to rural areas, especially the poverty-stricken areas and ethnic areas, support the development of special

education, protect the right to receive compulsory education for girls and the children of migrant workers, and build the modern remote education network in primary and secondary schools to share the high-quality resources. These policies have helped the urban and rural children, teenagers and the people to enjoy more equal education opportunity and more high-quality educational resources.

3.5 Establishment of Modern Education Systems

In 2008, there were 260 million students at all sorts of schools nationwide, of which nearly 160 million students were receiving nine-year compulsory education. Among more than 19 million secondary school graduates, over 85% were ascended to the stage of high schools, of which more than half entered to secondary vocational schools. Among more than 8.3 million high school graduates, over 73% ascended to colleges and universities, of which more than half of them entered senior vocational schools. There were more than 1 million postgraduates and 240,000 doctoral candidates studying and making research at schools. The establishment and continuous improvement of the education system has not only guaranteed the people's opportunity to receive education and build a solid foundation for the construction of harmonious socialist society, but also provided a powerful assurance of talents and human resources for the construction of well-off society and socialist modernization.

Main Targets for Education Development of Set by the National Guideline for Medium and Long term Educational Reform and Development (2010-2020)

Table 4.1 Main Targets for Education Development

Index	Unit	Year 2009	Year 2015	Year 2020
Preschool Education				
Number of Students at Kindergarten	100,000 Persons	2658	3400	4000
Gross Entry Rate One Year Prior to School	%	74.0	85.0	95.0
Gross Entry Rate Two Years Prior to School	%	65.0	70.0	80.0
Gross Entry Rate Three Years Prior to School	%	50.9	60.0	70.0
Nine-year Compulsory Education				
Students at School	100,000 Persons	15772	16100	16500
Consolidating Rate	%	90.8	93.0	95.0
High School Education*				
Students at School	100,000 Persons	4624	4500	4700
Consolidating Rate	%	79.2	87.0	90.0
Vocational Education				
Students at School for the Middle-class Vocational Education	100,000 Persons	2179	2250	2350
Students at School for the Senior-class Vocational Education	100,000 Persons	1280	1390	1480
College Education**				
Total Number of Persons Receiving Education	100,000 Persons	2979	3350	3550
Students at School	100,000 Persons	2826	3080	3300
Of which: Postgraduate Students	100,000 Persons	140	170	200
Gross Entry Rate	%	24.2	36.0	40.0
Continuing Education				
On-job Employees Continuing Education	100,000 Persons	16600	29000	35000

Notes: *including the number of students receiving middle-class vocational education;
**including the number of students receiving senior-class vocational education.

Table4. 2 Main Targets for Human Resources Development

Index	Unit	Year 2009	Year 2015	Year 2020
Number of Persons Received the College Education	100,000 Persons	9830	14500	19500
Average Years of Education Received by the Work Force at the Primary Ages	Year	9.5	10.5	11.2
Of which: Proportion of Persons Received the College Education	%	9.9	15.0	20.0
Average Years of Education Received by the New Work Force	Year	12.4	13.3	13.5
Of which: Proportion of Persons Received the High School Education or above	%	67.0	87.0	90.0

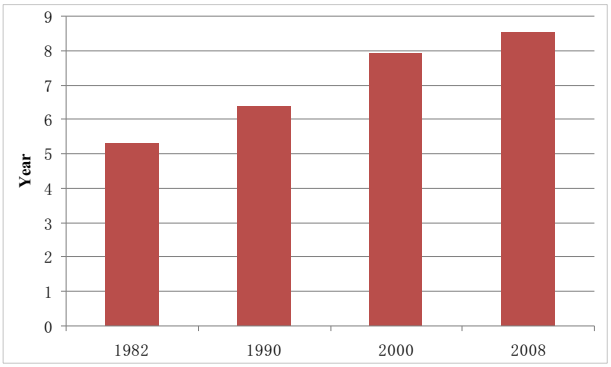


Figure 4.3 Average Years of Education Received by the Population at 15 and above, 1982-2008

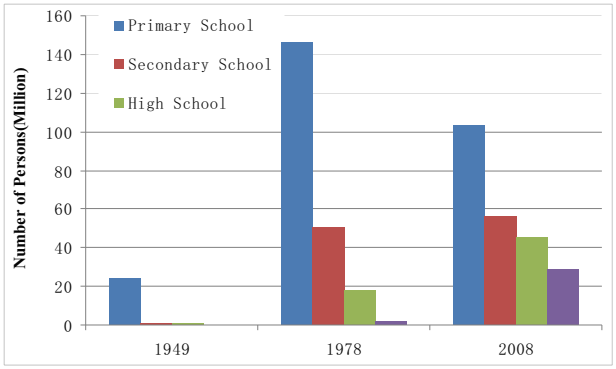


Figure 4.4 The Number of Students at Different Schools, 1949-2008

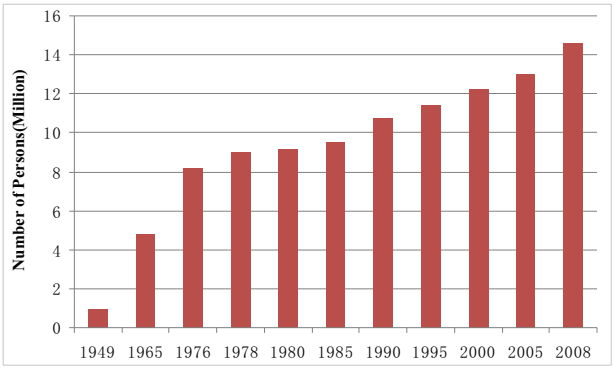


Figure 4.5 The Number of Full-time Teachers, 1949-2008

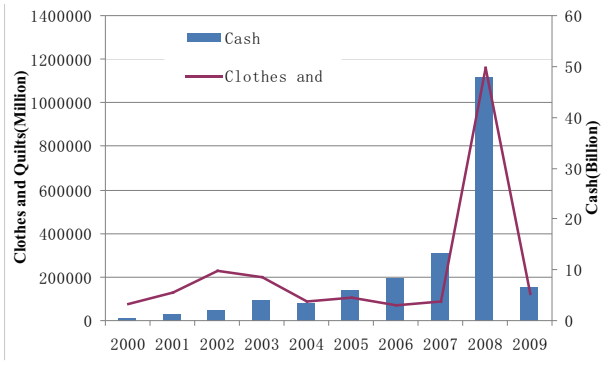


Figure 4.6 Social Donations Received by Civil Affairs Administrations

4 Emerging Social Charity

Since the reform and opening-up and through the efforts of urban and rural governments and all walks of the society in China, the framework for the development charities has been formulated on the basis of the philanthropic culture, charity organizations, charity policies and charity donations, and the government support, community sponsorship and public participation.

The Ministry of Civil Affairs promulgated the *Guidelines for the Development of Charity in China (2006-2010)* in November 2005. The Guidelines indicates that it is an important part of the traditional Chinese virtues and human civilization to widely carry out the activities of voluntary donations of assets and labor by citizens, legal persons and other organizations, help the poor, the elderly, orphans, disabled and ill, support education and make other charity contributions,. In the course of realizing the well-off society, implementing the scientific development concept and building a harmonious socialist society, the development of charities is highly important for organizing and mobilizing social resources and regulating the gap between the rich and the poor, easing social conflicts and promoting social equity, improving the quality of citizens and promoting social accountability, creating unity, friendship and harmony, and promoting the socialist material civilization, political civilization and spiritual civilization.

At present, the spread of philanthropic culture in China is unprecedented, and philanthropic idea becomes more and more popular. The charity activities, such as charity performance, charity auction, charity sale and charity medical consultation have expanded the impact of charity in the communities. The elections of "Charity Star", "Charity Person" and "Charity Ambassador" and the activities of "Charity Week", "Charity Concert" and "Charity Artwork Show and Auction" have advocated the philanthropic actions, created a philanthropic atmosphere and promoted the socialist spiritual civilization. Philanthropy has played an increasingly important role in supporting the elderly, handicapped, orphans, the poor, students and patients, resulting in a positive and far-reaching social impact.

According to the statistics of the Ministry of Civil Affairs, by the end of 2009, there were 33,000 regular social donation stations, points and charity supermarkets nationwide, of which there were 8,101 charity supermarkets. Those stations, points and supermarkets have basically formed a social donation network covering all cities in China, and are being expanded to some township communities and communities gradually. Throughout 2009, the civil affairs departments at all levels received total donations of 6.86 billion Yuan from all walks of the society, of which the in-kind donation was 220 million Yuan. The civil affairs departments received 124.766 million pieces of clothes and quilts, of which 13.844 million were pieces of cotton-padded clothes and quilts. The civil affairs departments indirectly received social donation of 1.41 billion Yuan and 6.81 million pieces of clothes and quilts via other departments, of which 5.276 million pieces were cotton-padded clothes and quilts and the in-kind donation was 18.849 million Yuan. These donations benefited 15.223 million persons (times) in poverty and need.

After the Wenchuan massive earthquake in the west of China on May 12, 2008, the people nationwide and disaster-stricken people joined hands, shared weal and woe, overcame great difficulties, and gave selfless assistance and great support to fight against disasters and rebuild their homes. According to the announcement of the Ministry of Civil Affairs on May 12, 2009, the total value of domestic and foreign donations received for earthquake relief nationwide reaches 76.712 billion Yuan. Among these donations, the China Red Cross received 4.955 billion Yuan, the China Charity Federation received 927 million Yuan, and other 16 national foundations that were authorized to carry out earthquake relief donation activities received donations of 1.2 billion.

Now, the devastated earthquake-stricken areas have taken on a new look. The disaster-hit people are building their new homes with full confidence.

After a 7.1-grade- Richter earthquake that occurred in Yushu, Qinghai Province on April 14, 2009, the social contribution of more than ten billion Yuan has been received so far.

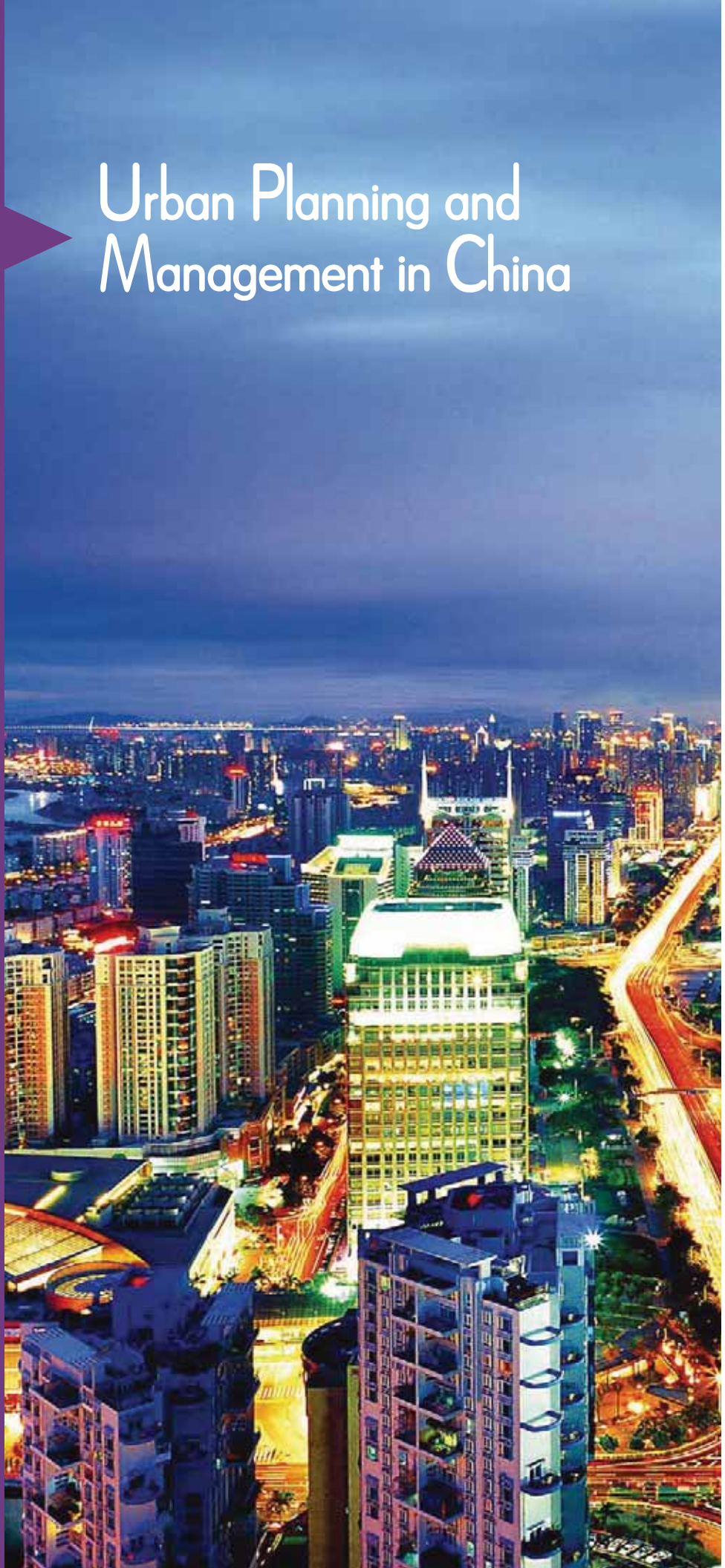
Beichuan Middle School is rebuilt after Wenchuan Earthquake

Chapter five

05

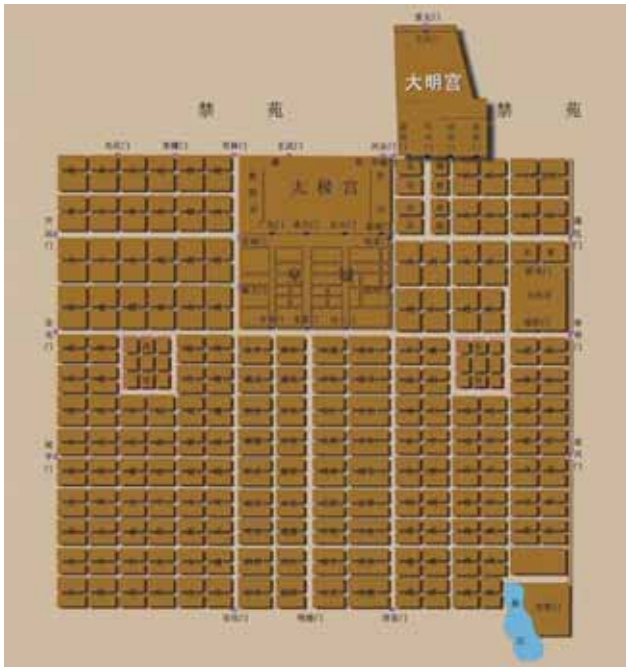
Urban Planning and Management in China

Unlike many other countries in the world, the urban planning in China is not just local affairs, but a matter shared by the central and local governments. Since the Reform and Opening-up policy launched over 30 years ago, China has experienced rapid economic growth and accelerated urbanization. The function of cities has been enhanced continuously, resulting in the formation of some important metropolitan areas such as Shanghai, Beijing and Guangzhou, that are listed in the major urban agglomerations around the world. During this process, urban planning plays an important role, which not only is an important policy tool to promote the growth of local economy and guide the urban development and construction, but also an important approach for the central government to implement the macroeconomic control. The success of the cities in China manifests the success of urban planning in China.



1 Origin and Development of Modern Urban Planning and Management in China

Urban planning and management in China has a very long history. Since the ancient times, there have been many naive urban planning and urban management philosophies. These philosophies are affected by the modern concept of planning from the West. Several major cities carried out comprehensive urban planning. The modern municipal management system has been established and improved gradually. The founding of the People's Republic of China marks the beginning of China's large-scale modern urban planning. Generally speaking, the master planning carried out in Beijing during the mid-twentieth century is regarded as an important symbol. The two entirely different economic systems before and after the Reform and Opening-up, namely the planned economy and market economy, have provided unique sources for the urban planning and management in China.



Map 5.1 Palimpsest Map of Chang'an City in Tang Dynasty
Source: Dong Jianhong, Urban Development History in China

Box 5.1 Chang'an City in Tang Dynasty

Tang Dynasty was established in 618 AD. Emperor Gaozu of Tang changed Daxing of Sui Dynasty to Chang'an City, and constructed Daming Palace in the northeast of Chang'an City in October, AD 634. After that, Tang Dynasty upgraded Chang'an City three times. The upgraded Chang'an City was huge, with an area of 90 square kilometers in total.

The layout of Chang'an City has three characteristics: (1) strictly symmetrical from east to west; (2) street blocks neatly arrayed; and (3) full use of terrain. During the most prosperous period of Tang Dynasty, Chang'an City's urban population reached 1 million, being the largest capital in the world. The infrastructure and facilities in Chang'an City were perfect, with systematic water diversion, drainage system and traffic facilities and management. The Grand Canal and ancient mail post network ensured the food supply in the Capital and transmission of ordinances from the central government.

1.1 Traditional Urban Planning and Management in Ancient China

Prehistory city appeared in China in 6,000 years ago. The cities were booming between 2800-2300 BC[1], and there saw a certain pattern of city planning prototype. Xia Dynasty (about 2000-1600 BC) had records about the construction of cities, and Shang Dynasty (about 1600-1046 BC) was the budding time of urban planning system in ancient China. This period had an unprecedented boom of urban construction and planning. As the currently available archaeological data shows, the planning and layout of Xibo City (Capital of Shang Dynasty, current Yanshi County in Henan Province) adopted the zoning model that took the imperial palace as the center, while Yin City(current Anyang City in Henan Province) created an open-layout model and stressed the integrated planning with the surrounding areas. Zhou Dynasty (1066-256 BC) was the heyday of the slave society of China, and also a period when the Chinese ancient urban planning system was formed. The people in Zhou Dynasty summed up the previous experience of construction, and developed a set of city management system, including the city construction model, building method, ritual facility construction and operation system, city planning system and *Jintian* grid system (a land tenure system). After the unification of China by Emperor Qin Shi Huang in 221 BC, he divided China into four major

economic areas, stressed the regional planning. The Western Han Dynasty(202 BC- 8 AD) further strengthened the role of regional cities and towns network. As represented by Luo Capital in North Wei Dynasty(386-557 AD), Chang'an City(Current City of Xi'an) and Luoyang City in Sui Dynasty(581-618 AD) and Tang Dynasty(618-907 AD), the capital planning emphasized the grand scale, square and net arrangement of city walls, strict layout of streets and lanes(*Fangli*). Rigid functional partition system reached a new height. The number of cities during that period increased dramatically. As represented by Bianliang City (the Capital of the Earlier Song Dynasty, 960-1127 AD, current city of Kaifeng in Henan Province), the construction of cities broke the restriction of traditional lane(*Fangli*) system, which promoted the prosperity of the commodity economy. This exploration was fully manifested in the Lin'an City, the Capital of Southern Song Dynasty (1127-1279 AD). The main function of the city was changed from the political function in slave society into economic center. At the late period of the feudal society, the planning of ancient Chinese capitals was inherited from the established planning tradition from various aspects. The reform and adjustment was in combination with the political and economic trends at that time. During that period, the urbanization was accelerated; the regional planning was further improved; city's defense function was enhanced to a new level; and the overall layout of cites was further highlighted.

Zhou Rituals–Engineering Records, *Zhou Li – Kaogongji*, is considered as the most influential document in the ancient China on cities and urban planning ideas.[2] About 3100 years ago, China formed a comparatively comprehensive urban planning system, including basic theory of urban planning, building systems, planning systems and planning methods. The ancient concept of urban planning stressed the overall, regional and natural importance.[3] The regional planning and urban planning activities in Nantong City carried out by Zhang Jian, a neoteric national industrialist, were considered as the practice earlier than the theory created by British sociologist Ebenezer Howard in his Garden Cities.[4]

Box 5.2 Zhang Jian and Nantong City, the First City in Neoteric China

When Zhang Jian (1853-1926) was operating industrial projects in Nantong City, he also carried out urban developments in a creative manner. His philosophy of developing Nantong city was not only based on the urban concept, but also seeking the overall coordinated development of urban and rural areas. He placed the industrial area at Tangzha (west part of the City), port area at Tiansheng Port (on the bank of Yangtze River), and private residence garden and scenic zone at Langshan Hill. The distance from each place to the old city was about 6 km respectively. Roads connecting the old city were built, which formed the layout of "one city and three towns" taking the old city as the center. The city and towns were separate from each other, and each had clearly defined functions and could be developed rationally without pollution. He built city parks in the downtown, which were expanded to five small parks in 1918 in the east, south, west, north and middle of the City. It was so called "there were five parks north to the Five Hills and all of them standed facing each other". He expanded the old city rationally, constructed public, administrative, commercial, financial and entertainment facilities, restaurants and hotels outside the South Gate of the city and along the Taowu Road, constructed schools, museums, libraries and other educational facilities along Hao River, expanded the space for development in the new urban area, and stressed on the creation of urban landscapes. He also founded charity and community welfare utilities, including orphanage, geracomium, hospital, rest home and the disabled home, etc.

Zhang Jian's philosophy of urban construction was originated from the farming society of China. He made comprehensive consideration of the rural and urban development and "integrated" the dispersed villages, towns and cities. This mode was called as "Nantong Mode". For this reason, Nantong City was reputed as the "Pioneer City in Neoteric China". (Wu Liangyong)

1.2 Urban Planning and Management under the Planned Economy System

China implemented the national economic plan from 1952. Compatible with the national economic planning, the urban planning in new China was focused on the spatial distribution of productivity and physical development of urban centers. The urban planning further deepened the national economic plan and presented it with spatial arrangement. A planning system with regional planning, master planning and detailed planning, and the national uniform technical standards were developed successfully to facilitate the industrialization process in China. A number of industrial cities, represented by Baotou City in Inner Mongolia Autonomous Region, Daqing City in Heilongjiang Provnce, and Panzhihua City in Sichuan Province were built. The urban-rural gap and the gap between the rich and the poor were controlled at a relatively low level. Under the rigid residential registration

system and the "scissors difference" in prices between industrial goods and agricultural products, it was believed that China's urbanization level had been underestimated.

Influenced by the theory of urban planning and management from the former Soviet Union, urban planning and management in China had a strong state-led feature. After the founding of new China in 1949, the central government not only formulated the guidelines for urban planning, established agencies, issued instructions and engaged some experts from the Soviet Union as consultants, but also defined the comprehensive functions of urban planning in the implementation of the planned national economic development and urban development and construction through the practical work. During the 1st Five-year Period(1953-1957), urban planning played a very important role in the construction of 156 National Key Projects, from the selection of the sites of key industrial projects to the adjustment of relationship between industrial projects and urban development, integration of infrastructure construction, modification and expansion of old cities, and even definition of the construction standards of factory living quarters. In the selection of factory sites by the "Joint Selection Group" composed of the departments of industry, railway, health, water, electricity, public security, culture, urban construction of the State Council, local governments and experts, the urban planning played a decisive role. During this period, there were more than 150 cities nationwide that made their plans for urban development.

During the periods of "Great Leap Forward" and "Cultural Revolution", the urban planning and management in China became chaotic and stagnated. Responding to the "Great Leap Forward" in economy, there was also a "Great Leap Forward" in the urban development. The estimation in the urban population and land areas were far beyond the actual demands. In November 1960, the Central Government ordered to "cease urban planning within three years", which caused the dissolution of many local urban planning agencies and the absence of the guidance of the planning in urban construction. The "three-line"[6] construction from 1964 adopted the guidelines of "close to hills, dispersal and concealment" and "close to hills, dispersal and excavation", and created the concepts of "non-concentrated city development", and " industrialization without urbanization", making the urbanization separated from the industrialization. During a period of ten years in the "Cultural Revolution" beginning from 1966, local urban planning agencies were dissolved, the planning workforce was dismissed, and the urban planning work was abandoned seriously. All these caused the disordered urban construction and management.

1.3 Urban Planning and Management under the Market Economy Environment

Since the implementation of reform and opening-up Policy in 1977, the market economy system have been established and gradually improved in China. In October 1980, the State Council reiterated the important position and role of urban planning, and mentioned that to build a good city should first have a good plan and that "the mayor's main responsibility is to make good urban planning, construction and management". It also stressed the development of a legal system for urban planning, and made the decision for the first time the urban comprehensive development and the compensation of land use. The reform of rural economic system fully implemented in the 1980s released a large number of rural surplus labor and pushed a large number of rural migrant farmers to work, do business and live in cities. The driving force of urbanization in China began to be released.

In January 1984, "The City Planning Ordinance", China's first urban planning regulation, was promulgated and enacted, creating a legal framework for the implementation of urban planning and management and so a fundamental change of the absence of guidance of urban planning. At the end of 1989, the NPC Standing Committee adopted the City Planning Act of the People's Republic of China, which entirely set out the guidelines for urban development, basic principles of urban planning, and schemes for the formulation and implementation of urban planning and legal liabilities, etc. The Act also established a set of basic systems regarding the modern urban planning and management in China, such as "urban planning area" and the scheme of "one letter and two permits": Guideline Letter for Site Selection (GLSS), Planning Permit for Land Development (PPLD) and Planning Permit for Construction Engineering (PPCE), These instruments played an exemplary role in the orderly urban development and construction and enabled the urban planning in China to enter into a legalized road.

The Amendment to the Constitution in 1988 permitted the transfer of urban lands with compensation, which promoted the prosperity of the real estate industry. The "real estate boom" and "development zone boom" that occurred nationwide at the beginning of the 1990s made the urban development out of macroscopic control and brought a huge challenge against the urban planning. The mode of urban planning and management adopted during the period of traditional planned economy obviously could not meet the needs of the growing market economy. To reverse this situation, the compilation and practice of regulatory detailed planning was implemented nationwide, so as to strengthen the regulation of urban real estate development.

After the reform of taxation system in 1994, local governments had their own interests and demands significantly different from those of the central government. The central government hoped to play a greater role in urban planning. In May 1996, the State Council issued "Circular Regarding the Strengthening of Urban Planning", which stated that "the basic task of urban planning is to uniformly arrange the various lands and spaces in cities, comprehensively deploy the various construction projects and realize the sustainable economic and social development." This was the new positioning of urban planning by the central government under the conditions of market economy. Urban planning was no longer just an extension of the national economic plan, but the regulatory measures to guide and regulate the investment activities of different market players.

The "Real Property Law", enacted in 2007 with the legal protection of private properties lawfully obtained pari passu with public properties, greatly stimulated the wishes of property owners to protect their own interests, and enhanced the policy's nature of urban planning. To maintain public interest, protect urban safety, conserve resources and environment and promote the healthy development of urbanization became the new historic mission of city planning. With the new "Urban and Rural Planning Act"enforced in 2008, the mission of technical urban planning was gradually shifted from overall planning as the main function during the planned economy period to regulatory detailed planning. At the same time, public participation in urban planning became an important driving force in the transformation of planning. The state government emphasized the integrated urban and rural planning and restriction over the planning administrative power.

In the past three decades, the cities in China experienced tremendous changes in several aspects: shift from the traditional regional political and economic centers to the urban nodes connected with the world market; gradual shift from focus on the manufacturing sector to the balanced development of the secondary and tertiary industries; shift from the continuous expansion of urban space to the focus on economical use of resources and sustainable development; and shift from the development led by or even directly taken by the government to the development undertaken by developers with the guidance by rules made by the Government .

In short, the formation and improvement of China's contemporary urban planning and management system has not only adopted Chinese traditional ideas of the human-earth and urban-rural harmony, but also manifested the influence of the international ideas of urban planning and management. For example, the idea of regional planning and master urban planning is originated from the planned economy theory of the former Soviet Union; the idea of planning permit and urban design is originated from the development control theory from Britain and other countries; the idea of regulatory detailed planning is originated from the zoning regulation in Germany and North America; the idea of public participation and planning supervision is greatly influenced by the concept of modern democracy and governance.

Beijing Olympic Park
Source: Urban Planning Society of China etc. Urban Miracles

2 Urban Planning and Management System

2.1 Urban Management

2.1.1 State Authorities

The legislature in China is the National People's Congress and local people's congresses at all levels. The State Council of the People's Republic of China, i.e. the Central People's Government, is the highest executive organ of state power and the highest organ of state administration. Local people's governments at all levels are local executive organs of state power at all levels and local organs of state administration at all levels.

2.1.2 Administrative Regions

In accordance with the Constitution, the whole country is divided into provinces, autonomous regions and municipalities that under the direct administration of the central government. Provinces and autonomous regions are divided into autonomous prefectures, counties, autonomous counties and cities. Counties and autonomous counties are divided into townships, nationality townships and towns. Municipalities and larger cities are divided into districts and counties. Autonomous prefectures are divided into counties, autonomous counties and cities. Autonomous regions, autonomous prefectures and autonomous counties are nationality autonomous areas. Provinces, municipalities, counties, cities, municipal districts, townships, nationality townships and towns set up people's congresses and people's governments, which are the local organs of state administration.

China has implemented an administrative system with five levels since 1982, namely the central government, provincial governments (provinces, autonomous regions and municipalities, special administrative regions); prefecture-level governments (prefecture-level cities, autonomous prefectures and leagues); county governments (municipal districts, county-level cities, counties, autonomous counties, banners, autonomous banners, special economic zones, forest zones) and; township governments (townships, nationality townships and towns). At present, it is being changed to an administrative system with four levels, i.e. central government, provincial governments, municipal and county governments, and township governments.

Box 5.3 Urban and Rural Areas

In China, urban area generally refers to the municipalities, cities and towns established according to the national administrative system. The fifth census in November 1, 2000 put forward a new standard for urban area from the geographical point of view. The census designated the urban area as cities with districts, cities without districts and towns. The area of a city with district refers to all administrative regions governed by the district at the population density of 1,500 persons/ square kilometer and above, district government seats and other communities governed by the district at population density of less than 1,500 persons/ square kilometer, as well as all administrative areas of the surrounding towns extended to by the urban development. The area of a city without districts refers to the area where the people's government of the city is located and where other communities governed by the city are located, as well as all administrative areas of the surrounding towns and townships extended to by the urban development. The area of a town refers to the area where the people's government of the town is located, other areas of resident committees governed by the town, all areas of villager committees extended to by the urban development from the area where the town government is located. In addition, some special areas beyond the urban areas, such as industrial and mining areas, development zones, tourism zones, scientific research units, colleges and vocational schools, where the population of permanent residents is more than 3,000, are designated as towns. Other areas are designated as the rural.

2.1.3 Municipal System

In China, talking about the city or town will involve two concepts. The first concept is the population. Cities and towns are human settlements where a certain number of non-agricultural population and non-agricultural industries are concentrated. Their residential and social organization is different from villages. According to this concept, the

hierarchy of China's urban and rural settlements consists of villages, townships, towns and cities. Villages and townships are the rural settlements, which are collectively referred to as rural areas; while towns and cities are the urban settlements, which are collectively referred to as urban areas.

The second is the concept of administrative region, where sets up administrative institutions: city, town, township and village, and demark their administrative border according to certain standards. Administratively, China's urban centers are different from most of the other countries in the following two aspects. One is that urban centers have strict administrative hierarchy. The hierarchy from low to high includes towns, county-level cities, prefecture-level cities, sub-provincial cities and municipalities. County-level cities are without districts in the administrative aspect. Other cities include districts and a certain number of counties, and serve as an acting administrative body for certain number of county-level cities. The other is that the administrative jurisdiction of the urban centers are generally far greater than the actual geographical scope of urban settlements, i.e. a city and town is a mix of urban and rural areas in the administrative concept, including the settlements in cities and towns and also large area of villages, the neighborhood communities and resident committees, and the township governments and villager committees.

2.2 Urban Planning Administration

Today, in China, urban planning is a legally authorized government function. China's urban planning system is composed of planning legislation, planning administrative system, planning technical system and planning supervision.

2.2.1 Planning Legislation

State laws, including enabling statutes, i.e. Urban and Rural Planning Law (2007), and corresponding regulations, such as Provisions for the Administration of Planning and Construction of Villages and Towns (1993) and Provisions for the Protection of Historic and Cultural Cities, Towns and Villages (2009), etc. The Law is promulgated and enacted by the National People's Congress (highest legislative body), and the Provisions are promulgated by the State Council representing the central government.

Departmental Rules, which are promulgated by the urban planning administrative department of the State Council, including the Rules for Planning Administration of Leasing and Transfer of State-owned Urban Land Use Rights (1992), Measures for the Administration of Qualification of Urban Planning Compiling Units (2001), Measures for the Administration of Foreign-invested Urban Planning Service Enterprises (2003), Rules for Compilation of Urban Planning (2005), Rules for Administration of Yellow Lines in Cities (2006), and Rules for Compilation and Approval of Provincial Urban System Planning (2010), etc.

Technical regulations, i.e. national technical standards promulgated by the central government, including comprehensive standards, general standards and special standards, etc., of which, some are compulsory and some are recommendatory. Examples of common standards: Standard of Basic Terms in Urban Planning, Standards for Urban Land Classification and Planning of Construction Lands, Code of Urban Residential Area Planning and Design, Code of Urban Road and Traffic Planning and Design, Code for Comprehensive Planning of Urban Infrastructures, etc.

Regulatory documents, i.e. the provisions regarding urban planning promulgated by the central government and its departments, such as Circular of the Administrative Office of the State Council Regarding Reinforcing and Improving the Urban and Rural Planning, Circular of the Administrative Office of the State Council Regarding Forwarding the Opinion of the Ministry of Construction Regarding Reinforcing Comprehensive Urban Planning, Circular of the State Council Regarding Reinforcing the Supervision and Administration over Urban and Rural Planning, etc.

Additionally, there are also various planning related laws and regulations, including state laws, such as Land Administration Law, Environment Protection Law and Real Estate Administration Law, etc.; administrative regulations, such as Regulations of Urban Afforestation, Regulations of Scenic and Historic Interest Areas, Regulations of Basic Cropland Protection, etc. These laws and regulations set out the guidelines and procedures must be complied with in urban planning, or set out the relationship between other statutory planning and urban planning. Local people's governments may formulate the local laws, regulations and administrative rules within the scope of legislative power in accordance with the state laws and regulations.

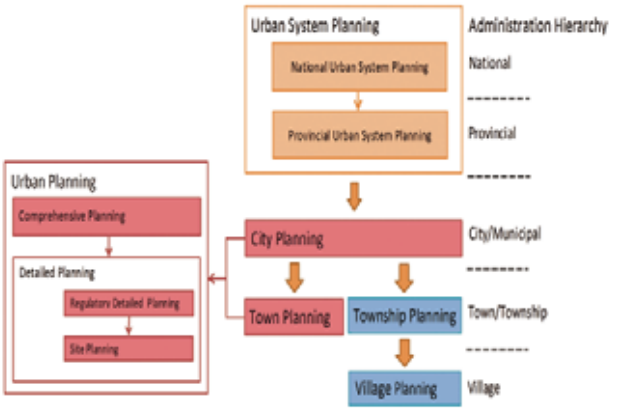


Chart 5.1 Planning System in China
Source: by the author

Box 5.4 Urban Planning and Relevant Planning

According to incomplete statistics, in China, there are 83 kinds of statutory planning compiled by the governments at various levels as authorized by law, of which the economic and social development planning (National Development and Reform Commission is the competent authority at national level), overall land use planning (Ministry of Land Resources is competent authority at national level) have the closest relationship with the urban planning. The former is originated from the economic planning in early the 1950s, focused on the arrangement of the number of investment and construction projects. From the "11th Five-year Plan Period"(2006-2010), the traditional social and economic plan was replaced by the spatial planning which regulates the use of land within all administrative areas, and focuses on the protection of arable land. The use of Urban construction land is only one type of land use included therein. In recent years, the macroscopic planning begins to study the issue of urban internal spatial structure in cities. These changes in recent years, on one hand, show that the extent of the government's emphasis on the spatial planning has been raised during the course of transition from planned economy to market economy in China; and on the other hand, show the existence of function crossover and overlap between the government departments.

2.2.2 Urban Planning Administrative System

Box 5.5 Urban Land System in China

China adopts two land ownership systems, i.e. state-owned land ownership and collective land ownership. In China, the land ownership is separate from the land use right, the term of land use rights vary with different land usages. In accordance with Article 10 of the Constitution, "Land in the cities is owned by the state. Land in the rural and suburban areas is owned by collectives except for those portions which belong to the state in accordance with the law, House sites and private plots of cropland and hilly land are also owned by collectives. " "Land use right can be transferred according to law." In accordance with Article 54 of the Land Administration Law, The right to use the state-owned land can be obtained through allocation for the use by government organs and military purposes, for building urban infrastructure and public welfare undertakings, for building energy, communications and water conservancy and other infrastructure projects supported by the State. But right to use the land for other purposes can only be obtained through paid leasing. In accordance with the Interim Regulations Concerning the Leasing and Transfer of the Right to the Use of the State-Owned Land in the Urban Areas, the maximum term for the leased right to use the land is determined respectively in the light of the purposes: 70 years for residential purposes; 50 years for industrial purposes; 50 years for the purposes of education, science, culture, public health and physical education; 40 years for commercial, tourist and recreational purposes; and 50 years for mixed utilization or other purposes.

Urban planning administrative authorities at different levels. Ministry of Housing and Urban-Rural Development (MOHURD), is the urban planning administrative authority at the national level, within which there is Urban and Rural Planning Department; at the provincial (autonomous region and municipality) level, the urban planning administrative authority is the provincial Construction Department or the Housing and urban-Rural Development Department, or Planning Bureau of Municipalities[5]; at the city level, generally there is Urban Planning Bureau or similar governmental department; at the county (district) level, generally there is also a dedicated planning administrative agency. The main duties of an urban planning administrative authority include formulating the urban planning policies applicable in the administrative area, organizing the compilation and approval of urban plans according to law, issuing the urban planning administrative permit and approval, and supervising over the urban planning administrative act of lower levels of governments.

Planning compilation system corresponding to the government administrative system. In accordance with the principle of one level of government with one level authority and in accordance with the authority under the law, urban and rural planning compilation system includes national urban system planning within the power of the central people's government, the provincial urban system planning within the power of provinces, autonomous regions and municipalities, urban comprehensive planning within the power of city governments, and towns (townships) planning within the power of town (township) governments. The power of county-level governments in the planning compilation is mainly manifested in the compilation of the county seat comprehensive planning.

Urban planning permit system. China adopts a planning permit system. The laws state that all urban development activities must conform to the urban plan. If

the land use right is obtained through allocation, the land may be allocated by the land administrative authority only after the developer has obtained the PPLD. . If the state-owned land use right is obtained through paid leasing, the Planning Conditions according to the approved urban plan shall be the premises for leasing and issuance of the PPLD. . For any construction of buildings, structures, roads, pipelines and other projects, the PPCE must be obtained before the actual operation of the construction. In addition to the PPLD and PPCE, the law provides other planning administrative tools such as the CLSS, verification of planning conditions, and completion and acceptance survey.

In addition, the approval of urban plans has been one of important functions of the urban planning administrative system. In general, every urban comprehensive plan shall be approved by a government at higher level, but the urban comprehensive plans of 106 cities nationwide should be submitted to the central people's government for approval. Urban detailed plan is generally examined and approved by the city government according to the approved urban comprehensive plan.

2.2.3 Urban Planning Technical System

China's urban planning technical system includes statutory planning and non-statutory planning. The statutory planning system includes urban system plan, urban comprehensive plan and urban detailed plan. Among them, according to its geographical area, the urban system plan is divided into national urban system plan, provincial urban system plan and municipal urban system plan, of which the first two are independent statutory plans, while the last is a part of the urban comprehensive plan. Urban detailed plan is divided into regulatory detailed plan and site plan. The former is the fundamental basis for planning administration, and so is required to cover all planning areas. Non-statutory planning is an important supplement to the statutory planning system, and the most important non-statutory planning includes urban design, etc.

2.2.4 Urban Planning Supervisory System

The supervision over the urban planning includes the supervision by the people's congress (and its standing committee) over the planning administrative action of the government at the same level, the supervision of the public over the planning administrative action of the governments and the supervision by the governments at higher level over the planning administrative action of the governments at lower level.

The supervision of the people's congress focuses on whether the government has performed the duties of organizing the implementation of approved plans according to law and the actual progress in the implementation of plans. For that purpose, the laws set out that a people's government shall make reports to the corresponding people's congress. The supervision of the public over the governments focuses on whether the administrative action of the governments complies with the approved urban plans. The supervision of the governments at higher level over the governments at lower level includes two forms: (1) supervision and inspection by the governments at higher level in respect of planning compilation, approval, implementation, supervision and modification etc.; (2) dispatch of planning supervisors by governments at higher level to local governments. At present, the MOHURD has dispatched four groups of supervisors to 52 cities successively, including all provincial capital cities and national historic and cultural cities other than municipalities.

Box 5.6 Duties of Planning Supervisor

Planning supervisors mainly supervise over local governments in the following aspects: compliance of the compilation, approval and adjustment of urban comprehensive plans, overall plans of state-level scenic spots, historical and cultural cities conservation plans with the statutory authority and procedures; compliance of urban comprehensive plans with the requirements of provincial urban system plans, and implementation of the requirements under the provincial urban system plans regarding the urban development and control; compliance of the compilation, approval and implementation of interim construction plans, detailed plans and special plans with the compulsory contents of the urban comprehensive plans, overall plans of state-level scenic spots, historical and cultural cities conservation plans; compliance of the administrative permits of key projects and public invested projects with the statutory procedures, compulsory contents of the urban comprehensive plans, overall plans of state-level scenic spots, historical and cultural cities conservation plans; enforcement of the Rules for Compilation of Urban Planning, Rules for Administration of Green Lines (greenery areas) in Urban Areas, Rules for Administration of Purple Lines (historic preservation areas) in Urban Areas, Rules for Administration of Yellow Lines (areas for infrastructure facilities) in Urban Areas and Rules for Administration of Blue Lines (water areas) in Urban Areas; implementation of overall plans of state-level scenic spots, historical and cultural cities conservation plans; and other major issues affecting the implementation of urban comprehensive plans, overall plans of state-level scenic spots, historical and cultural cities conservation plans.

Table 5.1 52 Cities with Planning Supervisors Dispatched by the Central Government

Year	Cities with Supervisors Dispatched by the Central Government
2006	Nanjing, Hangzhou , Xi'an, Kunming, Guilin
2007	Shijiazhuang, Taiyuan, Shenyang, Dalian, Xining, Lanzhou, Wuhan, Changsha, Guiyang, Nanning, Fuzhou, Xiamen
2008	Hohhot, Changchun, Harbin, Hefei, Nanchang, Jinan, Qingdao, Suzhou, Ningbo, Guangzhou, Shenzhen, Haikou, Chengdu, Chongqing, Lhasa, Yinchuan, Urumchi
2009	Handan, Baoding, Datong, Jilin, Daqing, Wuxi, Xuzhou, Changzhou, Zibo, Tai'an, Kaifeng, Luoyang, Anyang, Xiangfan, Jinzhou, Zhuhai, Liuzhou

Source: MOHURD

2.2.5 Comprehensive Administrative Functions of Urban Planning

In China, urban planning not only regulates the land use, construction projects, city image and other physical aspects, but also has an important role to play in many areas regarding the urban management as an integrated administrative function.

In the field of urban economy, the state government's exercise of the function of guidance, adjustment and control of the economy through urban planning is of importance to the reasonable distribution of urban land resources, optimization of the spatial structure in cities and enhancing the service capabilities and economic benefits of cities. As a tool of adjustment and control of the state government for the urban development, urban planning adjusts and controls the urban land and space resources in the first place. It further promotes the economic and social development, and the coordination between the economic and social development and population, resources and environment.

In the field of social development, the major functions of urban planning include: at the macroscopic level, it is to analyze the relationship between urban social and economic development and urban construction, put forward the scientific and reasonable target and development strategy, set the overall layout of various facilities, and set down the main indicators, principles and requirements of planned construction. At the microscopic level, it not only controls the scope and nature of land use, building height, green rate, external environment and pipe network connection for the development of public services, and facilities the regulatory detailed planning, but also makes spatial arrangement and environment for the construction of buildings and engineering projects.

With respect to the land use, urban planning will, at the preparation stage, make objective assessment of the natural conditions of land and determine appropriate land for construction .in cities. In a regional context, it also sets down the requirements of control over the reasonable utilization and effective protection of resources, compiles the urban system plan, generally assesses the development and construction conditions of regions and cities, determines the urban development strategy of the region, and proposes actions for the development of main infrastructures and projects in the regions and cities. It uniformly arranges and generally deploys the use the land in the cities for various purposes on the basis of the general study of economic and social development. It properly utilizes the economic leverage of urban land classification, reasonably deploys the urban land resources according to the law of value, adjusts the urban land structure, and optimizes the efficiency of land and space utilization.

In the field of housing development, the urban comprehensive planning deploys the land for urban residential development through the comprehensive consideration of urban structure, urban land function zoning, urban road network and urban transport systems. In the stage of detailed planning, it makes more detailed planning on the basis of the land for residential development (including the land for reconstruction of old areas) defined in the urban comprehensive planning. Especially, the urban planning meets the housing demand of the people with moderate or low income in terms of site selection and construction standards, etc.

In the field of infrastructure construction, the urban planning should reasonably arrange the construction and schedule of various infrastructures, study and determine the scale and technical standards of urban transport, water supply, drainage, electricity, gas, heat, communications and integrated disaster prevention, environmental protection and other facilities, scientifically lay out such facilities, formulate the corresponding construction policies and measures, and coordinate the relationship between various governmental plans. It guides the implementation of various projects, and reserves and controls the land, environment and space for the expansion and construction of new projects as early as possible.

In the field of urban ecology, the urban planning mainly relates to urban landscape system planning, integrated environmental protection and pollution prevention and control planning. The main task of such urban planning is to put forward the planning objectives, solutions and measures for the reasonable development and utilization of natural resources, environmental protection and ecological

construction during a given period. Its aim is to improve the quality of urban ecology, maintain ecological balance and achieve sustainable development of cities. In recent years, along with the popularity of low-carbon eco-philosophy, urban ecological planning is increasingly becoming an important part of urban planning.

In the field of historical and cultural protection, the urban planning protects the cultural relics and historical sites, protect and preserve the patterns and landscape features of old cities, inherit and carry forward the excellent historical and cultural traditions. It address properly the relationship between preservation and development. It not only protects the precious cultural relics in cities, but also promotes the urban economic and social development and continuously improves the working and living environment of residents.

In the field of disaster prevention and reduction in cities, the urban planning covers the integrated urban disaster prevention planning which includes urban fire-fighting planning, urban flood prevention planning, urban air defense planning and urban earthquake prevention planning. It determines the standards of urban fire-fighting, flood prevention, air defense and earthquake prevention facilities, reasonably determines the level and scale of various disaster prevention facilities, scientifically lays out various disaster prevention facilities, formulates the prevention and management solutions and measures, and organizes the urban disaster prevention life-line system on the basis of the natural environment, disaster zoning and position of the cities.[6]

2.2.6 Urban Planning Functions of Governments at Different Levels

The Urban and Rural Planning Law of the People's Republic of China explicitly sets out the urban and rural planning functions of the central and local governments at all levels, including: organization of planning compilation and implementation, and supervision over the planning administration of governments at lower levels, etc. To put it in details, planning functions of the central government include:

To organize the formulation of the national urban system planning, examine and approve the provincial urban system plans prepared by the provincial governments and the urban comprehensive plans prepared by the people's governments of designated cities (refer to 2.2.2 above), and supervise over the planning administration of local governments. As for the MOHURD, its planning functions include: to formulate the policies, regulations and rules regarding urban and rural planning, organize the compilation of national urban system planning together with relevant central government departments, examine, approve and supervise the implementation urban comprehensive plans and provincial urban system plans, participate in review of the overall planning guidelines for land use, formulate the development plans and policies regarding the national scenic spots and guide the implementation of such plans and policies, and protect and supervise over the administration of historical and cultural cities, towns and villages together with the cultural relics administrative authority.

The planning functions of the provincial governments include: to organize the formulation of provincial urban system plan, examine and approve the urban comprehensive plan, carry out planning administration on the construction of regional infrastructure, and supervise over the planning administration of city and county governments, etc. The functions of the provincial governments focus on direction, coordination, examination and approval, supervision and inspection, while the city governments are responsible for direct operation and specific management, etc. Specifically, the city government's priorities include: organize the formulation of urban comprehensive plan and regulatory detailed plan, etc., issue the planning permits (PPLD, PPCE, etc.) according to law, carry out planning administration of the urban underground spaces and temporary buildings, propose and verify the planning conditions, administer the accreditation and certification of planning institutions and professional according to law, and crack down on unlawful land use and demolish unlawful buildings, etc.

Grand Bazaar, Urumqi
Source: Urban Planning Society of China etc. *Urban Miracles*

3 Challenges in Urban Planning and Management and Their Countermeasures

China's urban planning effectively guides the process of urbanization, directs and regulates urban construction and urban management, and promotes the continuous and fast growth of national economy. Without the active involvement of urban planning, it is impossible for the tremendous achievements of urban development in today's China. However, the urban planning and management in China is also facing a series of new challenges. The challenges include:

Rapid urbanization. The urbanization in China enters into the period of rapid development. In each year, it is necessary to provide the urban space, urban infrastructure, urban public services required by over 13 million newly increased urban population, and to satisfy the demand of the population in terms of employment, housing and social security.

Pressure of resources and environment. Water, energy and land resources have become the major bottlenecks constraining the economic growth, urbanization and motorization in China. To implement the sustainable development strategy and take energy saving and emission reduction strategy is the inevitable choice for China, and also the basic value of urban planning.

Social segregation. The differential development strategy in the last 32 years of Reform and Opening-up has effectively stimulated the increase of China's total economic output, but also expanded the social and urban-rural income gaps, and brought the inequality and social segregation.

Crisis of native culture. Although globalization and modernization has brought the opportunity of urban development, it has devastated the urban culture in China. Traditional Chinese culture and local culture have disappeared fast. A group of cities and neighborhoods with historic and cultural heritage have been ruthlessly demolished. The original social structure of cities has been destroyed. There is full of mechanical and grotesque architectural works. Humane urban design should be strengthened.

Challenge against the planning authority. With the gradual improvement of the market, the planning management under the old planned economic system is challenged by various stakeholders. How to preserve the authority of

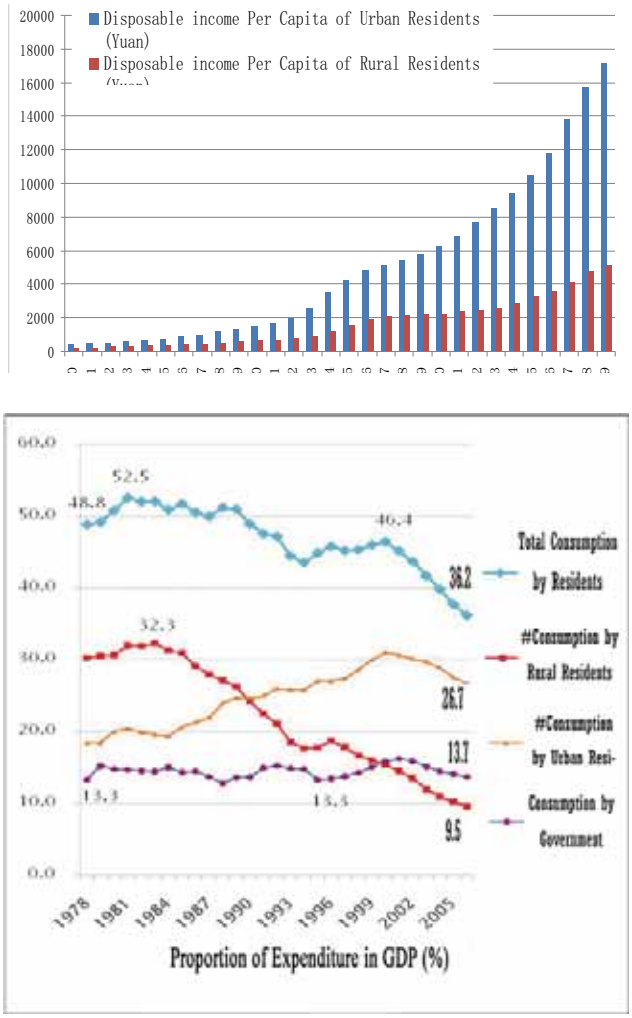
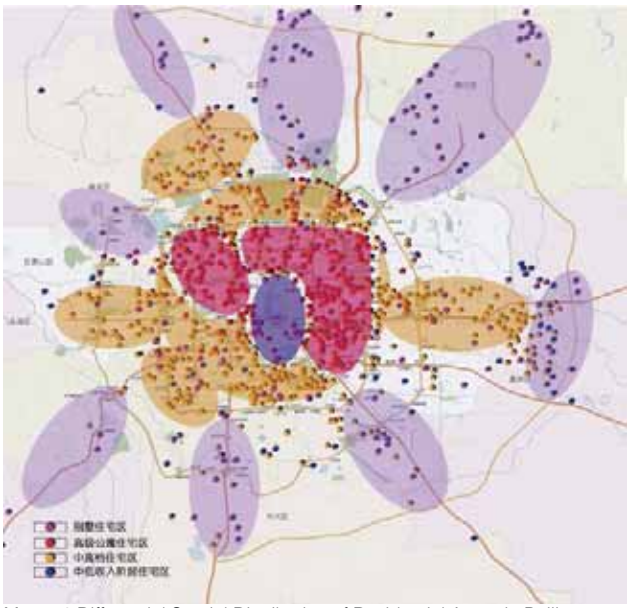


Figure 5.1 Difference of Income and Expenditure between Urban and Rural Residents in China
Source: based on data from National Statistics



Map 5.2 Differential Spatial Distribution of Residential Areas in Beijing
Source: Lu Qin of China Academy of Urban Planning and Design

urban planning depends on the innovation of system and concept of urban planning, and on the coordination of different levels of governments and different government departments.

To cope with various challenges, the central and local governments of China have effectively carried out a series of pioneering works since 2009 through summing up the experiences in the six decades of New China and the experiences in three decades of Reform and Opening-up.

3.1 Implementing National Urbanization Strategies

The central government puts forward the strategy of healthy urbanization and regards the urbanization as an important measure to promote the healthy economic and social development of China. When the central government pays attention to enhance the function of metropolitan region as the engine of national economy, it also proposes the coordinated development of small and medium cities and towns with emphasis on the development of towns. It favors the more equitable treatment of migrant workers through a series of innovations in the systems of household registration, employment and housing, etc. Integrated consideration of urban and rural areas is another important policy taken by the central government to narrow the gap between urban and rural areas. The essence of this policy is to find a better development path for the urban and rural areas as whole, and to build an open and unified market between the urban and rural areas where the human resources and various other production elements are integrated. Urban planning plays an important role in increasing the support of cities and industries to villages and agricultures, implementing the equalized public service system in urban and rural areas, as well as the coordinated development between different regions that are at different levels of economic development.

3.2 Enforcing Regional Development Plans

The Central Government has approved a number of regional planning or regional policy documents in 2009. In January, National Development and Reform Commission promulgated the Reform and Development Planning Outline of Pearl River Delta Region (2008-2020); in May, the Executive Meeting of the State Council deliberated and adopted Plan of West Coast Economic Zone of Taiwan Straits in Fujian Province; in June, the State Council deliberated and adopted Jiangsu Coastal Area Development Plan and Guanzhong – Tianshui Economic Region Plan; in July, Liaoning Coastal Economic Belt Development Plan was approved by the State Government; in August, Hengqin Overall Development Plan and China Tumen River Regional Cooperation and Development Planning Outline were approved; in September, Plan Regarding Promoting the Prosperity of Central Regions was adopted by the Executive Meeting of the State Council; in December, Plan for Yellow River Delta Efficient Ecological Economic Zone was approved. These regional plans and policies are developed to promote the economic and social development of the regions and major cities in these regions in terms of regional coordinated development and unified development of urban and rural areas.

In 2010, the State Council also approved Hainan International Tourism Island Plan and Jiangxi Poyang Lake Ecological and Economic Zone Plan successively. Continued strengthening of the "visible hand" by the government with joint effort of the "invisible hand" by the market will cause a new round of interaction between the urban spaces in China.

3.3 Regulating Urban Planning and Administration Procedures

New progress has been made in regulating the urban planning and administration procedures since the promulgation of the amended Urban and Rural Planning Law. Through setting strict administrative procedures and implementing open and transparent planning administration, the state laws make breakthroughs in promoting the legalization of planning and the democracy of planning decision-making. Since 2009, Beijing, Tianjin, Chongqing, Liaoning, Jiangsu, Zhejiang, Anhui, Shanxi, Hunan, Jiangxi, Guangxi, Guizhou, Gansu, Shaanxi, Xinjiang, Hainan and other provinces, autonomous regions and municipalities have developed their own rules or measures for the implementation of the national planningLaw. The central government also attaches great importance to the construction of relevant systems. The State Council has started to formulate "Rules for Modification of Urban Comprehensive Plan". The MOHURD has formulated "Measures for Assessment of Implementation of Urban Comprehensive Plan". In order to change the situation of frequent changes of regulatory detailed plans, especially improper adjustment of planning control indices such as floor area ratio, the central government has launched a nationwide special action for rectification, which is designed to "further promote the open and transparent decision-making and planning management and make ensure that planning and project approval would comply with the law". It is also designed to limit the discretion of planning administrative authorities, set down stricter procedures regarding the adjustment of floor area ratio, and combat corruption in the field of planning. For that purpose, Beijing, Shanghai, Tianjin, Chongqing,

Chengdu, Kunming, Nanjing, Chengdu and other cities have introduced corresponding special measures. In order to improve the quality of planning and management decision-making, after over 20 years of development, more than 200 cities in China have built the spatial data infrastructure. Nearly 300 cities have built information systems for planning review and approval. Governmental planning administrative authorities in most cities have made their governance transparent, and encouraged the public participation through websites, so as to improve the efficiency of their services and the quality of their administrative approval. These efforts play an important and fundamental role in achieving the information-networked planning and management, office automation, intelligent decision-making, openness of government affairs and services for the public.

3.4 Developing Plans to Provide Housing for Low-income Families

As one of the priorities in urban planning, housing planning focuses on strengthening the housing security and stabilizing the housing market. The coverage of low-income housing is not comprehensive enough. The housing conditions of some low-income urban residents, especially those mining towns and forest urban areas, are far worse than the overage housing conditions of urban residents. Rural migrant workers are not included in the urban housing supply system. Commercial housing price continues to rise. Faced with those problems, the central government has issued "Circular Regarding Guaranteeing the Lands for Low-income Housing Projects", which calls for putting priority on the construction of low-cost housing in cities and reconstruction of shantytowns in forest, wilderness and mining areas, speeding up the compilation and revision of 2010-2011 and 2009 low-income housing land supply plans, increasing the proportion of land for people's livelihood, and satisfying the demand of land for the construction of low-income housing. The State Council has explicitly made requirements for speeding up the construction of low-income housing, increasing the effective supply of general commercial housing and continuing to promote the large-scale construction of low-income housing projects. A number of cities, through the compilation of plan for low-income housing, have increased the supply of land for low-income housing construction, strengthened the reconstruction of old residential areas, and satisfied the demand of residential housing of the middle and low income groups through building the small-area housing with complete facilities, reasonable design and advantageous location. Since the order made for construction of low-rent housing system by the central government in 2007, the low-rental housing, as the effective means to solve the housing difficulties for the urban low-income residents, has become the most important measures in China's low-income housing policy system. In order to curb the rapidly rising housing price, the central government regulates and controls the housing market through credit, tax and other means. Local governments have also taken corresponding measures to restrict real estate speculation. Some coastal regions have started to make special study on the housing for rural migrant workers[7]. S0me cities have even built special residential communities these workers.

3.5 Formulating Plans to Improve Urban Transport

Public transport, green transportation and demand management concepts are highly valued by the government decision-makers. Some cities have started to implement the systematic management of urban transport. Slow moving traffic means, such as walking and bicycle, have been become a focus of interest by the government and public. Represented by Hangzhou, the capital city of Zhejiang Province, a group of cities have tried the public bicycle rental service in downtowns. Beijing has developed "Beijing Walking and Bicycle System Planning Design Guidance. Hangzhou has developed Hangzhou Non-motor Vehicle Transportation Strategy Development Plan and Hangzhou Slow Traffic System Plan. For metropolises, convenient rail transportation has become an inevitable choice. The central government has explicitly showed its support. At the end of 2009, the central government approved the urban rail transportation construction plans for 25 cities, including Shanghai, Beijing, Tianjin, Chongqing, Guangzhou, Shenzhen, Nanjing, Hangzhou, Wuhan, Chengdu, Harbin, Changchun, Shenyang, Xi'an, Suzhou, Ningbo, Wuxi, Changsha, Zhengzhou, Dongguan, Dalian, Qingdao, Kunming, Nanchang and Fuzhou. The total length of planned urban rail transportation reaches 2,610 km. The length of urban rail transportation under construction is about 1,400 km. In Mainland China, 33 urban rail transportation lines in 10 cities, with a total length of 933 km, have been put in operation. Among the major cities, Shanghai has the longest length of rail transportation lines (nearly 332 km), and the length of Beijing's rail lines is 228 km, while the length of Guangzhou's rail lines is 148 km. The improvement of regional transportation, particularly the construction of high-speed railways, has greatly enhanced the links between cities and shortened the distance and travel time between cities. At present, there are 10 high-speed railway lines operating in China, of which, the high-speed railway lines have been operating between Wuhan - Hefei, Chengdu - Chongqing, Fuzhou - Shanghai, Wuhan - Guangzhou, Zhengzhou - Xi'an since 2009. The running speed reaches 200 km/hr or above.

3.6 Upgrading the Approval of Urban Comprehensive Plans

With respect to the compilation of urban comprehensive plans, the Rules for Modification of Urban Comprehensive Plan issued by the Administrative Office of the State Council set out stricter procedures for the modification and adjustment of approved plans, stress on the assessment of implementation of urban comprehensive plans. The assessment has focused , on the achievement of the objectives of urban comprehensive plans, the enforcement and its mechanism, the implementation of mandatory requirements, the status of various infrastructure planning, interim construction planning and regulatory detailed planning according to the approved comprehensive plan, as well as the public's views on the implementation of such planning. The central government has also strengthened the approval and administration for urban comprehensive plans. The number of cities whose urban comprehensive plans are approved of the central government increased from 86 cities to 106 cities. Most of the 20 newly added cities are located in developed regions, such as Pearl River Delta and Yangtze River Delta, which embodies the importance that is attached by the central government to those regions. In the process of planning compilation, the public participation and coordination among government departments are emphasized.

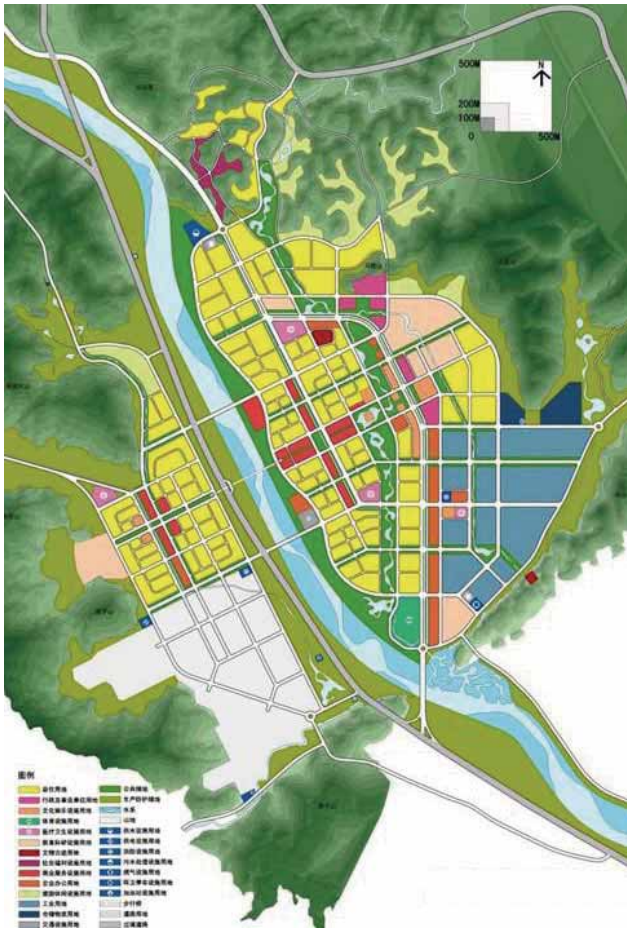
Table 5.2 Cities with Urban Comprehensive Plans Subject to the Approval of the Central Government

Province	Number	Original Cities	Newly Added Cities
Beijing	1	Beijing	
Tianjin	1	Tianjin	
Hebei	6	Shijiazhuang, Tangshan, Handan, Zhangjiakou, Baoding	Qinhuangdao
Shanxi	2	Taiyuan, Datong	
Inner Mongolia	2	Hohhot, Baotou	
Liaoning	10	Shenyang, Dalian, Anshan, Fushun, Benxi, Fuxin, Jinzhou, Dandong, Liaoyang	Panjin
Jilin	2	Changchun, Jilin	
Heilongjiang	8	Harbin, Qiqihar, Daqing, Yichun, Jixi, Mudanjiang, Hegan, Jiamusi	
Shanghai	1	Shanghai	
Jiangsu	9	Nanjing, Xuzhou, Wuxi, Suzhou, Changzhou	Nantong, Yangzhou, Zhenjiang, Taizhou
Zhejiang	6	Hangzhou, Ningbo	Wenzhou, Taizhou, Jiaxing, Shaoxing
Anhui	4	Hefei, Huainan, Huaibei	Ma'anshan
Fujian	2	Fuzhou, Xiamen	
Jiangxi	1	Nanchang	
Shandong	11	Jinan, Qingdao, Zibo, Yantai, Zaozhuang, Weifang, Tai'an, Linyi	Dongying, Weihai, Dezhou
Henan	8	Zhengzhou, Luoyang, Pingdingshan, Xinxiang, Kaifeng, Jiaozuo, Anyang	Nanyang
Hubei	4	Wuhan, Xiangfan, Jingzhou, Huangshi	
Shaanxi	1	Xi'an	
Gansu	1	Lanzhou	
Hunan	4	Changsha, Hengyang, Zhuzhou, Xiangtan	
Guangdong	10	Guangzhou, Shenzhen, Shantou, Zhanjiang, Zhuhai	Dongguan, Foshan, Jiangmen, Huizhou, Zhongshan
Guangxi	3	Nanning, Liuzhou, Guilin	
Hainan	1	Haikou	
Chongqing	1	Chongqing	
Sichuan	1	Chengdu	
Guizhou	1	Guiyang	
Yunnan	1	Kunming	
Tibet	1	Lhasa	
Ningxia	1	Yinchuan	
Qinghai	1	Xining	
Xinjiang	1	Urumqi	
Total	106	86	20

Source: MOHURD

3.7 Post Disaster Planning and Reconstruction

The disaster prevention and mitigation in urban areas has always been particularly concerned by the governments at all levels in China. After Wenchuan Earthquake in 2008, the central and local governments at all levels attached great importance to post-disaster reconstruction. By observing the principles and measures of strengthening the organizational leadership, highlighting scientific reconstruction, implementing policies, relying on the masses, reinforcing support, assisting the reconstruction and insisting on disclosure of information, all stakeholders played an active role. Up to now, post-disaster reconstruction in Sichuan Province was successfully implemented in improving the people's livelihood, infrastructure, urban reconstruction and industrial development. In the first half of 2009, reconstruction plans were developed for 39 hardest-hit counties (cities, districts), 631 towns and townships and 2043 villages on time. At the end of 2009, the originally approved restoration and reconstruction of 1.263 million rural houses was completed.



Map 5.3 Comprehensive Plan of New Downtown,Beichuan County
Source: China Academy of Urban Planning and Design

The accumulated number of commenced reconstruction of urban housing in Sichuan Province was 254,000 units, of which, 193,500 units have been completed, at a completion rate of 74.7%. The accumulated number of repaired and reinforced houses with damages was 1,347,800 units, at a completion rate of 99.94%. In 38 key cities and towns to be reconstructed, 419 municipal infrastructure projects were to be reconstructed, of which the development of 287 projects started, accounting for 68.5%, and 65 projects was completed. The investment of 4.35 billion Yuan was completed, accounting for 60.8% in the total investment. At the end of April 2010, among 29,704 projects included in the "Wenchuan Earthquake Post-disaster Restoration and Reconstruction Comprehensive Plan" of the Sichuan Province, 28,886 projects started, accounting for 97.2%, 23,232 projects was completed, accounting for 78.2%. The investment of 678.75 billion Yuan was completed, accounting for 72.3% in the total investment budget.

3.8 Preserving Historic and Cultural Heritages

With the promulgation and implementation of "Ordinance Regarding the Preservation of Historical and Cultural Cities, Towns and Villages", the Planning Department of MOHURD established a Office for Historical City. The central government and local governments at all levels have done a lot of work and made a lot of achievements in the implementation of the Ordinance. At the end of 2009, 16 cities have applied for the title of "National Historical and Cultural City"(NHCC). The number and time of applicant cities are unprecedented since the announcement of the first batch of NHCC in 1982. There are 196 towns and villages in 29 provinces, municipalities and autonomous regions (of which there are 86 towns and 110 villages) that have applied for the fifth group of national historical and cultural towns and villages.

The protection concept regarding historical and cultural cities, towns and villages is improved continuously, and the technical methods are also optimized continuously. The strategic position and function of historical and cultural cities are highlighted. Through the choice of realistic mode for the protection of historical and cultural cities, the comprehensive evaluation system for the protection of historical and cultural cities has been established. The urban design has been integrated to renew the historic and spatial features of cities. As a result, physical and spiritual features of historical and cultural cities are conserved and Chinese civilization is continuously promoted.

Traditional Open Space with Petty Repair Becomes a Popular Entertainment Place for Residents in Quanzhou
Source: photo by Zhang Jing, China Academy of Urban Planning and Design

Notes:

[1] Ma Shizhi, China Prehistoric Ancient Cities, Wuhan, Hubei Education Press, 2003

[2] Dong Jianhong, Urban Development History in China (3rd Edition), Beijing, China Construction Industry Press, 2004

[3] Zhou Ganzhi, Shi Nan, Zou Deci, Introduction, in Fundamentals of Urban Planning edited by Zou Deci, Beijing, China Building Industry Press, 2002

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[5] Mao Zedong, former Communist Party leader divided China into three regions according to their strategic position against outside invasion. Line one region basically are coastal region, line two the central China and line three the western part excluding Autonomous Regions of Xinjiang, Tibet and Inner Mongolia.

[6] Beijing has Beijing Municipal Commission of Urban Planning; Shanghai has Shanghai Municipal Bureau for Planning and State-own Land Resources Administration; while Tianjin and Chongqing have Tianjin Planning Bureau and Chongqing Urban Planning Bureau.

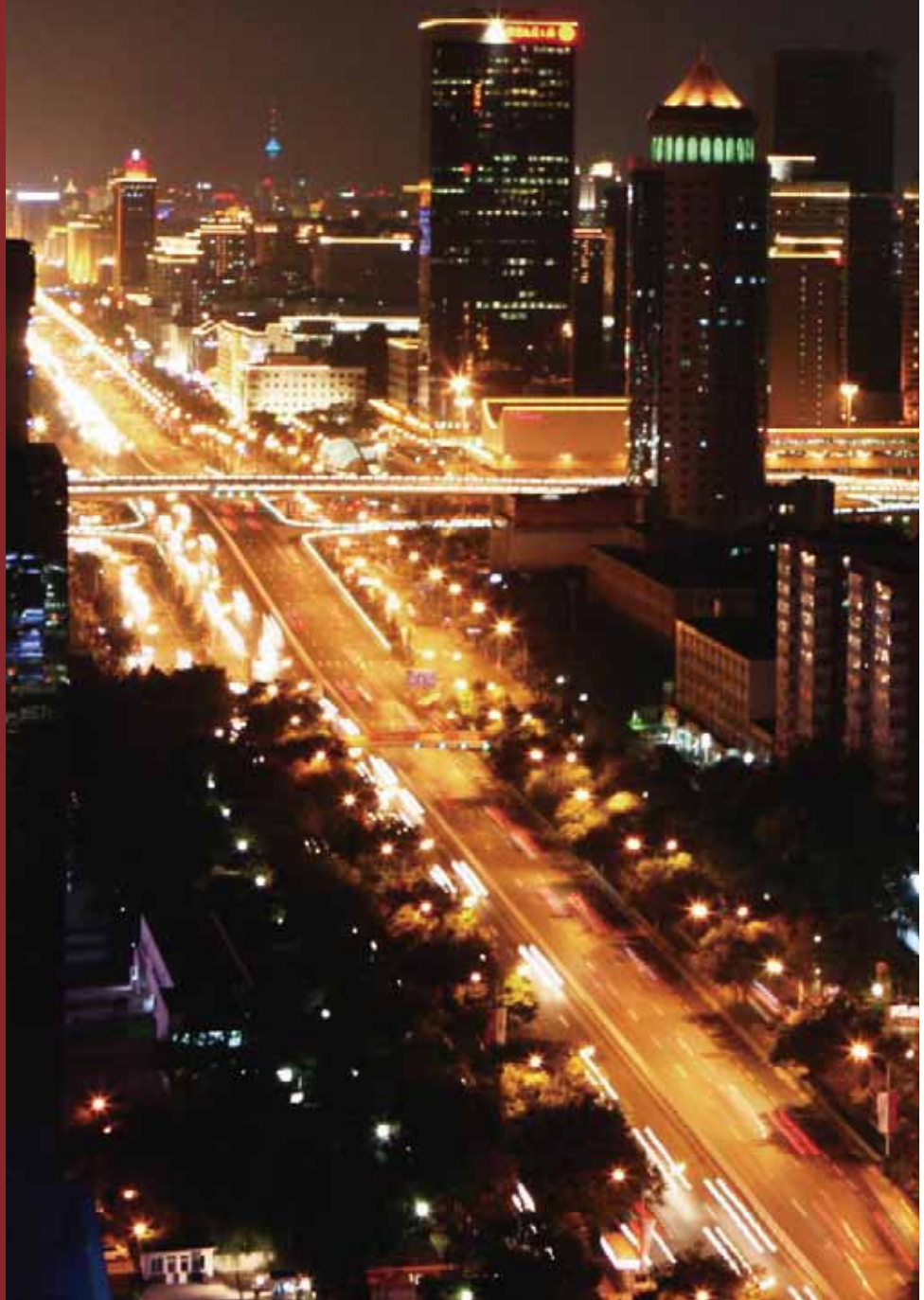
[7] Urban Planning Society of China, etc., Reader of Urban Planning, Beijing, China Building Industry Press, 2001

[8] The Central Government issued the Several Opinions Regarding Addressing the Issues of Peasant Workers in 2006, which ordered to "include the issue of residence of peasant workers who have worked and lived in cities into the urban residence construction and development planning", but the governments of most cities still leave the housing demand to the employers of peasant workers.

Chapter six

06

Future Challenges of Urban Development in China




SOFITEL
万达广场
WANDA PLAZA

The level of urbanization is an important indicator of industrialization and modernization of a country. In the history of world development after the Industrial Revolution, if a country expects to successfully realize the modernization, it should advance the urbanization along with the industrialization. Low level of urbanization will limit the expansion of domestic demand and affect the upgrading of industrial structure. It is also the main reason of disharmony in regional economic development. Therefore, accelerating the process of urbanization is an important part of economic restructuring.

China's urbanization entails a huge potential for domestic demand. It is predicted that the rapid development of urbanization in China will continue for a long time. In 2030, the urbanization ratio will reach 65%, and the population in various cities and towns will increase by more than 300 million, which will provide a strong and sustaining momentum for the expansion of consumption and investment demand. Firstly, urbanization can effectively expand the scope of urban consumers and increase the consumption of urban residents. Secondly, urbanization can increase the consumption level of rural residents. Gradual transformation of rural population to urban residents can help promote the appropriate agricultural scale operation, and significantly increase the income of farmers and enhancing their consumption levels. Thirdly, urbanization can be a powerful boost for the investment demand. The increase of urban population can boost the investment demand in the aspects of urban infrastructure, construction of public service facilities and real estate development. From a broader perspective, in the period after the international financial crisis, global market demand is comparatively low. Therefore, the expansion of domestic market brought by the urbanization will be of importance to the economic development in China. Furthermore, the huge demand arising from the development of the Chinese domestic market will become an important condition for China's reciprocity in cooperation with other countries.

In the next few years, China's urbanization ratio will exceed 50%. This will be followed by a series of profound changes in the patterns of people's life and the economic and social structure. At this critical time, it is important to firmly grasp the tremendous opportunities from urbanization to actively and steadily promote the urbanization and enhance the quality and level of urban development. It is also important to adhere to the road of urbanization with Chinese characteristics, promote coordinated development of medium and small cities and small towns, strive to improve the overall carrying capacity of cities and towns, bring into full play the radiating role of cities in leading the development of rural areas, and promote the economic development in county areas. At present, the priority should be placed on strengthening the development of medium and small cities and small towns. The employment and settlement of the eligible rural migrant population in cities and towns should be regarded as the main task in promoting urbanization. The restriction of residential registration in medium and small cities and small towns should be relaxed. The priority should also be placed on improving the quality of urban planning, the construction of municipal infrastructure and the urban governance so as raise the level of urbanization in a comprehensive manner.

China Pavilion

Better City, Better Life

The site of the 2010 Shanghai Expo, an area of 5.28 square kilometers, is located in the downtown area on both sides of the Huangpu River. It is the largest in World Expo history. There are two types of buildings on the site, permanent and temporary. The permanent buildings consist of the Expo Boulevard, Theme Pavilion, World Expo Center, Expo Cultural Center, and China Pavilion.

"Better City, Better Life" is the theme of Expo 2010. No Expo prior to Shanghai has been hosted with the concept of "the city" as its theme. By hosting more than 80 cities from all over the world in the Urban Best Practices Area, the 2010 Expo breaks with the convention that individual nations and international organizations are the principal participants. Five Theme Pavilions—the Urban Dwellers Pavilion, the Urban Life Pavilion, the Planet Earth Pavilion, the Footprints Pavilion and the Future Pavilion—examine the Expo theme of "Better City, Better Life" from a different angle. Moreover, in accordance with the theme of "Better City, Better Life", existing buildings of historical and industrial interest on the site are effectively protected and utilized, 18,300 households and 272 factories located on the site are also properly relocated.

Overview of Expo Site

Beijing CBD

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Statistical Annex

1 Basic Urban Statistics of China from 1978 to 2008

Year	National Total Population year-end (10 000)	Total Urban Population year-end (10 000)	Proportion of Urban Population (%)	Number of Cities (Unit)	Number of Towns (Unit)	Total Number of Employed Persons (10 000)	Total Urban Employed Persons (10 000)	Number of Registered Unemplyed Persons in Urban Areas (10 000)	Registered Unemployment Rate in Urban Areas (%)	Gross Domestic Product (100 million yuan)	Per Capita GDP (yuan/ person)
1978	96259	17245	17.92	193	2176	40152	9514	530	5.3	3645.2	381
1979	97542	18495	18.96	216	2361	41024	9999	568	5.4	4062.6	419
1980	98705	19140	19.39	223		42361	10525	542	4.9	4545.6	463
1981	100072	20171	20.16	233	2678	43725	11053	440	3.8	4891.6	492
1982	101654	21480	21.13	245		45295	11428	379	3.2	5323.4	528
1983	103008	22274	21.62	289	2968	46436	11746	271	2.3	5962.7	583
1984	104357	24017	23.01	300	7186	48197	12229	236	1.9	7208.1	695
1985	105851	25094	23.71	324	9140	49873	12808	239	1.8	9016.0	858
1986	107507	26366	24.52	353	10718	51282	13292	264	2.0	10275.2	963
1987	109300	27674	25.32	381	11103	52783	13783	277	2.0	12058.6	1112
1988	111026	28661	25.81	434	11481	54334	14267	296	2.0	15042.8	1366
1989	112704	29540	26.21	450	11873	55329	14390	378	2.6	16992.3	1519
1990	114333	30195	26.41	467	12084	64749	17041	383	2.5	18667.8	1644
1991	115823	31203	26.94	479	12455	65491	17465	352	2.3	21781.5	1893
1992	117171	32175	27.46	517	14539	66152	17861	364	2.3	26923.5	2311
1993	118517	33173	27.99	570	15805	66808	18262	420	2.6	35333.9	2998
1994	119850	34169	28.51	622	16702	67455	18653	476	2.8	48197.9	4044
1995	121121	35174	29.04	640	17532	68065	19040	520	2.9	60793.7	5046
1996	122389	37304	30.48	666	18171	68950	19922	553	3.0	71176.6	5846
1997	123626	39449	31.91	668	18925	69820	20781	577	3.1	78973.0	6420
1998	124761	41608	33.35	668	19216	70637	21616	571	3.1	84402.3	6796
1999	125786	43748	34.78	667	19756	71394	22412	575	3.1	89677.1	7159
2000	126743	45906	36.22	663	20312	72085	23151	595	3.1	99214.6	7858
2001	127627	48064	37.66	662	20374	73025	23940	681	3.6	109655.2	8622
2002	128453	50212	39.09	660	20601	73740	24780	770	4.0	120332.7	9398
2003	129227	52376	40.53	660	20226	74432	25639	800	4.3	135822.8	10542
2004	129988	54283	41.76	661	19883	75200	26476	827	4.2	159878.3	12336
2005	130756	56212	42.99	661	19522	75825	27331	839	4.2	183217.4	14053
2006	131448	57706	43.90	656	19369	76400	28310	847	4.1	211923.5	16165
2007	132129	59379	44.94	655	19249	76990	29350	830	4.0	257305.6	19524
2008	132802	60667	45.68	655	19234	77480	30210	886	4.2	300670.0	22698

Per Capita Disposable Income of Urban Households (yuan)	Per Capita Net Income of Rural Households (yuan)	Per Capita Floor Space in Urban Areas (M²)	Per Capita Living Space in Rural Areas (M²)	Per Capita Daily Water Consumption for Residential Use (liter)	Water Coverage Rate (%)	Length of Drainage Pipelines (km)	Gas Coverage Rate (%)	Per Capita Road Surface Area (M²)	Per Capita Public Recreational Green Space (M²)
343.4	133.6	6.7	8.1	120.6	36.3	19556	14.4	2.93	1.00
405.0	160.2	6.9	8.4	121.8		20432	16.1	2.85	
477.6	191.3	7.2	9.4	127.6		21860	17.3	2.82	
500.4	223.4	7.7	10.2	130.4	53.7	23183	11.6	1.81	1.50
535.3	270.1	8.2	10.7	132.4	56.7	24638	12.6	1.96	1.65
564.6	309.8	8.7	11.6	138.1	52.5	26448	12.3	1.88	1.71
652.1	355.3	9.1	13.6	143.3	49.5	28775	13.0	1.84	1.62
739.1	397.6	10.0	14.7	151.0	45.1	31556	13.0	1.72	1.57
900.9	423.8	12.4	15.3	161.9	51.3	42549	15.2	3.05	1.84
1002.1	462.6	12.7	16.0	164.1	50.4	47107	16.7	3.10	1.90
1180.2	544.9	13.0	16.6	170.4	47.6	50678	16.5	3.10	1.76
1373.9	601.5	13.5	17.2	172.4	47.4	54510	17.8	3.22	1.69
1510.2	686.3	13.7	17.8	175.7	48.0	57787	19.1	3.13	1.78
1700.6	708.6	14.2	18.5	196.0	54.8	61601	23.7	3.35	2.07
2026.6	784.0	14.8	18.9	186.0	56.2	67672	26.3	3.59	2.13
2577.4	921.6	15.2	20.7	188.6	55.2	75207	27.9	3.70	2.16
3496.2	1221.0	15.7	20.2	194.0	56.0	83647	30.4	3.84	2.29
4283.0	1577.7	16.3	21.0	195.4	58.7	110293	34.3	4.36	2.49
4838.9	1926.1	17.0	21.7	208.1	60.7	112812	38.2	4.96	2.76
5160.3	2090.1	17.8	22.5	213.5	61.2	119739	40.0	5.22	2.93
5425.1	2162.0	18.7	23.3	214.1	61.9	125943	41.8	5.51	3.22
5854.0	2210.3	19.4	24.2	217.5	63.5	134486	43.8	5.91	3.51
6280.0	2253.4	20.3	24.8	220.2	63.9	141758	45.4	6.13	3.69
6859.6	2366.4	20.8	25.7	216.0	72.3	157128	60.4	6.98	4.56
7702.8	2475.6	22.8	26.5	213.0	77.9	173042	67.2	7.87	5.36
8472.2	2622.2	23.7	27.2	210.9	86.2	198645	76.7	9.34	6.49
9421.6	2936.4	25.0	27.9	210.8	88.9	218881	81.5	10.34	7.39
10493.0	3254.9	26.1	29.7	204.1	91.1	241056	82.1	10.92	7.89
11759.5	3587.0	27.1	30.7	188.3	86.7	261379	79.1	11.04	8.30
13785.8	4140.4	28.0	31.6	178.4	93.8	291933	87.4	11.43	8.98
15780.8	4760.6	——	32.4	178.2	94.7	315220	89.6	12.21	9.71

2 Basic Statistics of China's 287 Cities at and above prefecture level in 2008

Name of cities	Landarea of City's dministrative (km^2)	Total opulation (year-end) (10 thousand)	Non-agricultural Population (10 thousand)	Area of Built-up District (km^2)	Gross Regional Product (10 thousand yuan)	Per Capita Gross Regional Product (yuan)	Fixed Assets Investment in Urban Sevice Facilities (10 thousand yuan)	Wastewater Treatment (%)	Domestic Garbage Treatment (%)	Water Coverage (%)	Per Capita Public Recreational Green Space (m^2)
Beijing	16411	1299.85	950.71	1310.94	104880500	63029	5189156	78.92	97.71	100.00	8.56
Tianjin	11760	968.87	588.27	640.85	63543800	55473	1661826	72.40	93.52	100.00	7.53
Shanghai	6340	1391.04	1216.56	886.00	136981500	73124	6900678	79.82	79.01	100.00	7.82
Chongqing	82826	3257.05	907.38	708.37	50966600	18025	2889371	84.20	92.82	93.20	9.62
Hebei Province											
Shijiazhuang	15848	966.48	398.31	190.86	28383712	28923	598526	77.21	100.00	100.00	9.30
Tangshan	13472	729.41	244.39	213.00	35611900	48054	586650	90.61	100.00	100.00	10.53
Qinhuangdao	7523	285.85	120.10	87.48	8089526	27481	254536	89.01	96.86	100.00	12.12
Handan	12062	928.08	299.70	104.06	19903633	22651	217422	76.86	100.00	100.00	12.01
Xingtai	12434	706.36	164.92	70.00	9890039	14315	202929	81.01	100.00	100.00	9.34
Baoding	20584	1141.73	301.40	129.00	15808884	14518	99450	93.81	100.00	100.00	8.03
Zhangjiakou	36873	459.67	147.18	80.00	7203705	17134	450321	75.86	61.62	100.00	7.55
Chengde	39548	369.38	98.05	83.70	7149413	21048	124975	56.04	72.18	100.00	24.14
Cangzhou	14053	710.10	214.87	44.25	17161616	24665	129757	76.98	90.89	100.00	4.71
Langfang	6429	408.28	122.40	55.98	10514939	25757	254751	83.01	95.05	100.00	12.11
Hengshui	8815	432.51	98.07	43.56	6338142	14843	49505	86.97	88.59	100.00	6.50
Shanxi Province											
Taiyuan	6989	360.23	260.65	238.00	14680851	42378	363822	68.40	90.01	100.00	7.58
Datong	14127	312.00	146.45	91.20	5696268	17974	210830	69.99		100.00	5.16
Yangquan	4570	129.34	77.17	51.23	3106529	23593	48434	64.99	81.00	100.00	8.80
Changzhi	13896	327.40	97.30	45.30	6821316	20821	46984	82.72	100.00	77.58	5.67
Jincheng	9421	221.59	53.36	31.00	5275490	23680	8172	94.97	92.08	100.00	11.61
Shuozhou	11066	155.17	39.78	29.00	4204038	27458	34189	94.24	47.77	91.53	9.00
Jinzhong	16404	317.90	89.20	38.28	5678066	18219	69964	65.64	0.39	96.24	9.37
Yuncheng	14181	499.40	89.61	30.00	6914452	12313	36950	75.00	56.00	90.66	7.55
Xinzhou	25117	303.26	67.55	21.40	3112485	10101	25227	88.02		87.49	1.13
Linfen	20275	431.92	108.58	37.40	7546316	18031	64279	82.86	11.00	93.24	11.26
Lvliang	21241	376.63	81.21	15.00	6296438	17553	96192	45.07	100.00	93.47	10.36
Inner Mongolia Autonomous Region											
Huhehaote	17224	224.30	105.50	154.00	13163700	49606	209213	44.11	95.18	95.34	15.74
Baotou	27768	217.76	135.58	180.00	17600038	70004	438795	67.32	97.25	78.00	11.21
Wuhai	1754	48.27	44.53	37.51	2401000	50036	35873	64.10	82.68	100.00	10.66
Chifeng	90659	456.49	107.19	77.00	7523927	17242	140354	90.65	82.99	58.74	5.54
Tongliao	59535	316.92	119.47	50.50	7419620	25402	49066	100.00	100.00	88.53	11.00
Eerduosi	86752	149.69	46.89	71.68	16030184	10218	607733	76.31	100.00	93.03	8.01
Hulunbeier	253356	272.48	180.28	28.00	6326600	23413	146568	97.25		74.36	20.00
Bayannaoer	64413	185.00	62.79	32.47	4390600	25237	4411	85.05	94.86	92.23	4.64
Wulanchabu	54492	287.11	71.82	35.00	4346864	20358	22300	87.50		85.29	26.12
Liaoning Province											
Shenyang	12980	713.51	460.49	370.00	38604745	54248	2571800	77.26	100.00	100.00	12.12
Dalian	12574	583.37	347.83	258.00	38582471	63198	634382	90.00	100.00	100.00	10.46
Anshan	9252	351.42	177.17	148.04	16078635	45830	98106	34.56	100.00	96.21	8.69
Fushun	11272	223.19	147.30	123.90	6624377	29645	102500	56.89	100.00	98.16	7.85
Benxi	8411	155.66	104.27	106.50	6108589	39199	56627	42.80	97.25	99.70	8.27
Dandong	15030	242.70	101.74	53.40	5638618	23223	48775		100.00	94.11	6.15
Jinzhou	10111	310.19	123.37	68.82	6904436	22287	57019	51.50	100.00	100.00	8.35
Yingkou	5402	233.80	108.31	97.12	7035683	30177	149473	63.20	89.87	95.86	10.36
Fuxin	10355	192.46	86.17	66.00	2339120	12134	19427		90.89	93.46	7.79
Liaoyang	4743	183.39	80.07	92.02	5666088	30897	34367	98.38	100.00	100.00	8.12
Panjin	4071	129.20	104.70	57.85	6750045	51214	61371	53.58	91.25	100.00	7.16
Tieling	12980	305.93	97.98	43.96	5363280	17543	159725	83.51	86.04	97.40	9.31
Chaoyang	19699	340.92	93.70	35.00	4466114	13114	18522	32.31	100.00	76.97	8.15

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Huludao	10415	280.40	86.73	67.50	4578221	16351	12182	87.20	100.00	100.00	11.43
Jilin Province											
Changchun	20604	752.53	331.85	327.71	25618985	34193	545193	74.01	90.19	97.14	12.11
Jinglin	27120	438.29	211.97	165.63	13000948	30016	79492	80.07	100.00	98.40	10.48
Siping	14080	337.56	127.36	39.00	5965476	17739	16000	44.98	100.00	69.79	7.28
Liaoyuan	5139	123.33	55.60	42.00	2711856	21989	46930	20.11	100.00	78.92	4.69
Tonghua	15195	227.70	104.82	47.34	4473262	19703	46242		100.00	89.73	9.21
Baishan	17485	129.68	88.57	65.00	3003488	23159	33621		100.00	95.70	6.70
Songyuan	21090	285.09	79.14	36.93	8067183	28486	34609	61.43	60.00	90.40	11.02
Baicheng	25745	202.90	80.74	38.11	2907212	14327	16340		88.69	89.80	7.62
Heilongjiang Province											
Haerbin	53068	989.86	476.95	340.33	28681851	29012	843415	74.75	91.75	80.94	8.37
Qiqihaer	42469	569.20	204.70	115.27	6658807	12272	33454	57.98	45.67	93.61	7.01
Jixi	22531	190.84	120.01	79.23	3158814	16541	2160		92.86	98.15	9.13
Hegang	14648	109.41	88.21	43.00	1846919	16887	12265			69.30	12.75
Shuangyashan	23202	150.46	93.69	58.80	2600512	17285	7435			97.40	12.89
Daqing	21219	277.23	136.80	175.77	22203734	80655	286198	98.35	100.00	96.03	15.22
Yichun	32759	127.63	109.38	160.90	1790114	14029	33351			65.69	17.83
Jiamusi	32704	251.64	124.04	62.39	3985000	15871	28466	60.13	77.36	85.92	9.71
Qitaihe	6221	90.22	50.91	62.37	1871613	20826	20122		74.24	81.04	9.13
Mudanjiang	40583	269.90	148.40	65.30	5060872	17983	34857	37.19	100.00	94.07	8.08
Heihe	68726	173.90	97.58	19.00	2056219	11800	8182			76.43	8.07
Suihua	34964	577.20	151.60	30.50	5417896	9397	25400			77.14	3.81
Jiangsu Province											
Nanjing	6582	624.46	517.22	592.07	37750000	60808	1316438	85.96	96.93	100.00	13.20
Wuxi	4788	464.20	325.15	208.00	44195000	95460	1164119	90.07	100.00	99.80	12.59
Xuzhou	11258	946.86	336.65	186.60	20073600	21367	284702	80.75	89.29	99.85	13.00
Changzhou	4385	358.74	177.73	120.51	22022300	61503	910537	86.21	100.00	100.00	12.12
Suzhou	8488	629.75	368.43	317.72	67012900	106863	778674	88.86	100.00	100.00	17.06
Nantong	8001	763.72	321.60	68.66	25101300	32815	530000	85.85	100.00	100.00	11.35
Liangyungang	7500	488.25	233.75	95.00	7501000	15458	321823	79.30	100.00	100.00	10.98
Suian	10072	536.91	152.84	100.00	9158300	17104	22550	81.00	100.00	99.20	9.81
Yancheng]	16972	811.71	303.82	79.20	16032600	19775	242464	80.79	100.00	100.00	11.40
Yangzhou	6634	459.79	217.03	75.00	15732900	34238	279168	86.03	100.00	100.00	18.71
Zhenjiang	3847	268.77	120.50	98.18	14081351	52391	283055	77.70	100.00	100.00	14.97
Taizhou	5797	500.89	178.69	58.50	13943800	27843	161098	81.38	100.00	100.00	8.29
Suqian	8555	534.58	238.29	58.40	6550600	12289	50617	78.74	99.94	97.20	11.33
Zhejiang Province											
Hangzhou	16596	677.64	340.76	367.26	47811649	70832	1547800	84.47	100.00	100.00	13.90
Ningbo	9817	568.09	198.49	241.57	39640472	69997	635778	81.29	100.00	100.00	10.31
Wenzhou	11784	711.99	164.44	164.00	24242923	31555	246786	58.07	93.33	100.00	6.81
Jiaxing	3915	338.07	130.14	83.50	18152979	43129	223115	77.48	100.00	100.00	11.36
Huzhou	5818	258.50	80.75	72.20	10348945	40089	171943	82.92	100.00	100.00	9.92
Shaoxing	8256	437.06	139.97	90.40	22229451	50909	85600	83.76	100.00	100.00	15.55
Jinhua	10941	461.41	105.31	69.67	16818457	36538	22658	71.01	100.00	99.79	12.00
Quzhou	8841	248.85	51.95	48.40	5800500	23362	74683	63.80	100.00	96.96	11.82
Zhoushan	1440	96.77	35.79	50.19	4902500	50683	71369	62.02	100.00	99.61	14.18
Taizhou	9411	574.06	103.35	114.66	19652660	34374	88124	70.15	96.25	97.85	8.71
Lishui	17298	255.43	44.54	26.50	5056756	22053	115579	62.89	97.04	100.00	6.71
Anhui Province											
Hefei	7047	486.73	209.99	268.00	16648400	34482	768530	99.16	100.00	96.67	10.30
Wuhu	3317	230.79	113.72	126.31	7496460	32500	666690	70.17	100.00	98.72	9.08

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Bengbu	5952	358.31	100.26	99.75	4863852	13632	104293	72.08	100.00	90.83	8.88
Huainan	2585	240.88	112.98	95.77	4536200	19809	122653	99.41	100.00	99.04	11.65
Maanshan	1686	128.10	63.06	72.00	6363000	49824	116606	81.40	100.00	100.00	13.25
Huaibei	2741	215.78	93.23	62.83	3490900	17029	28893	73.87	86.00	91.96	12.42
Tongling	1113	73.89	43.47	47.00	3253100	44100	55025	48.11	54.22	100.00	10.86
Anqing	15318	613.89	108.93	65.50	7047175	12595	130251	71.67	100.00	93.94	9.18
Huangshan	9807	148.35	35.69	39.71	2499000	16867	37168	95.46	94.09	99.30	14.51
Chuzhou	13523	447.37	97.60	43.89	5201110	11626	31058	54.64	100.00	99.63	7.30
Fuyang	9775	987.79	121.81	68.60	5412700	6475	105512	86.86	100.00	91.23	4.39
Suzhou	9787	626.06	82.27	45.70	5111031	8982	42739	59.19	94.01	98.97	7.35
Chaohu	9394	456.80	75.21	36.50	4793300	11600	21257	71.82	100.00	93.78	8.07
Liuanshi	17976	701.64	98.71	51.29	5339470	7473	50284	67.85	98.52	98.94	7.92
Bozhou	8374	588.77	65.06	32.00	4042200	7918	56937	84.85	100.00	98.41	7.59
Chizhou	8271	158.93	27.79	26.33	1924000	14147	146233	60.74	100.00	96.20	14.82
Xuancheng	12323	276.75	49.55	33.51	4116100	15953	153412	34.30	100.00	98.55	7.63
Fujian Province											
Fuzhou	13047	635.95	262.91	176.59	22841602	33615	854092	75.12	100.00	96.16	10.21
Xiamen	1573	173.67	118.58	197.00	15600218	62651	902036	96.45	100.00	97.93	11.04
Putian	4119	316.64	60.82	52.21	6099627	21515	115300	73.18	100.00	97.75	11.26
Sanming	23061	270.15	93.12	24.52	6669222	25407	15504	70.12	93.96	99.08	9.10
Quanzhou	11015	677.73	194.80	81.00	27052915	34840	445000	85.01	100.00	99.31	9.84
Zhangzhou	12873	468.50	135.12	47.52	10020167	21073	112468	73.56	98.56	99.24	9.51
Nanping	26315	308.13	106.98	26.10	5591439	19348	55052	62.45	98.12	94.99	10.22
Longyan	19063	291.30	86.50	35.00	6728476	24334	47366	82.98	95.45	99.17	10.59
Ningde	13248	335.03	100.94	17.18	5426716	17851	22605	8.95	99.46	98.74	12.93
Jiangxi Province											
Nanchang	7402	494.73	233.16	185.00	16600847	36105	414553	68.95	100.00	100.00	8.36
Jingdezhen	5256	158.23	62.64	72.84	3219756	20646	18585	54.52	100.00	99.62	13.61
Pingxiang	3824	185.77	57.71	41.48	3876366	21002	51850	59.97	100.00	99.26	9.18
Jiujiang	18823	484.67	133.10	89.47	7005984	14785	79818	86.65	100.00	99.98	11.45
Xinyu	3181	123.20	41.10	46.00	4023218	35629	165335	89.22	100.00	99.52	13.53
Yingtan	3554	116.11	33.89	23.68	2566218	23222	22415	85.04	91.77	98.52	14.55
Ganzhou	39380	888.95	185.30	55.00	8348486	10016	108036		100.00	100.00	8.14
Jian	24922	485.25	110.38	29.12	5050046	10571	56623	74.57	100.00	95.11	9.64
Yichun	18669	543.97	144.36	32.20	6150000	11336	44902	71.01	100.00	98.89	13.52
Fuzhou	18820	387.74	95.00	44.98	4340496	11233	78441	61.16	98.47	87.05	10.96
Shangrao	22791	716.35	133.83	27.08	6283382	9718	48641	81.02	100.00	99.66	10.06
Shandong Province											
Jinan	8177	603.99	350.23	326.20	30174243	45724	643575	82.55	79.21	99.57	9.81
Qingdao	10978	761.56	276.25	267.12	44361800	52677	582109	81.93	92.00	100.00	14.53
Zibo	5965	420.62	157.05	213.06	23167800	51547	153590	93.80	96.45	100.00	14.75
Zaozhuang	4563	383.24	82.74	106.39	10928300	29978	164833	87.16	96.49	98.75	9.82
Dongying	7923	183.97	63.29	96.72	20526200	102741	124649	83.89	91.99	100.00	16.84
Yantai	13746	651.69	128.14	211.18	34341900	49012	337631	92.54	95.40	99.86	16.38
Weifang	16005	862.48	124.91	132.00	24918100	28106	198204	69.72	73.58	99.66	8.00
Jining	11194	822.75	56.94	88.00	21221600	26721	98860	91.65	73.02	99.20	10.61
Taian	7762	554.72	66.28	97.40	15133000	27794	139649	83.05	92.34	99.80	15.70
Weihai	5698	252.23	47.86	120.00	17803493	63519	194631	83.92	92.02	100.00	23.92
Rizhao	5363	284.54	60.53	69.65	7731401	28300	334098	87.10	100.00	100.00	19.22
Laiwu	2247	125.96	49.52	56.50	4557900	35845	132756	86.02	100.00	100.00	18.27
Linyi	17182	1034.47	140.67	142.56	19582000	19949	301749	98.64	99.64	100.00	18.87
Dezhou	10356	564.19	41.81	46.50	14009100	25606	70368	61.93	88.13	99.95	18.97
Liaocheng	8703	584.91	97.02	63.31	12526700	22556	37724	95.20	92.00	97.81	16.12

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Binzhou	9454	375.68	49.43	78.00	12368300	33610	80704	77.25	79.12	100.00	18.17
Heze	12239	919.94	68.61	60.40	8217900	10050	109706	74.08	87.46	94.00	9.70
Henan Province											
Zhengzhou	7446	719.61	301.77	328.66	30039925	40616	457778	92.80	87.62	89.22	5.34
Kaifeng	6444	518.48	98.36	89.49	6893747	14713	42918	56.20	72.00	98.84	5.09
Luoyang	15200	686.50	188.02	163.95	19196384	30084	45156	94.27	81.97	66.36	7.65
Pingdingshan	7882	523.94	129.70	61.71	10677008	21998	47665	87.01	85.56	90.11	8.35
Anyang	7413	567.37	124.90	73.00	10360548	19924	66700	90.46	94.02	100.00	8.36
Hebi	2182	157.74	50.76	48.00	3423523	24070	18685	75.87	70.00	97.10	10.10
Xinxiang	8169	589.57	163.71	94.59	9494928	17217	46474	86.04	100.00	97.09	8.51
Jiaozuo	4071	361.25	106.03	89.96	10315860	30356	42988	61.40	83.59	100.00	9.40
Puyang	4266	396.24	74.17	36.00	6572798	18803	6383	39.21	95.45	92.11	12.52
Xuchang	4996	478.95	121.24	65.30	10620503	24706	21076	80.16	93.27	97.99	11.18
Luohe	2617	272.87	65.48	51.30	5502627	22237	23250	33.41	100.00	94.83	16.78
Sanmenxia	10496	227.69	67.65	28.50	6542124	29515	19662	92.98	99.01	94.33	16.07
Nanyang	26400	1147.61	179.11	87.39	16364296	16367	63399	56.00	78.91	70.99	10.96
Shangqiu	10704	901.11	166.53	58.50	9313905	12092	17102	83.07	85.71	62.69	4.93
Xinyang	19541	845.21	150.47	58.20	8667899	13015	20899	80.28	93.94	95.53	11.34
Zhoukou	11959	1188.08	147.97	42.00	9841251	9905	52904	76.39		91.51	9.88
Zhumadian	15083	865.18	130.37	49.24	8129755	10610	25846	91.89	84.39	57.70	7.14
Hubei Province											
Wuhan	8494	833.24	537.24	460.00	39600819	44290	2459180	87.08	99.99	99.83	9.25
Huangshi	4583	257.31	93.68	62.00	5565700	22980	71180	71.09	100.00	100.00	11.66
Shiyan	23680	351.03	101.92	59.50	4876426	13892	49232	20.00	95.84	90.72	9.09
Yichang	21048	400.83	133.70	81.56	10265600	25445	85648	84.33	91.00	100.00	10.73
Xiangfan	19724	584.38	194.71	79.26	10024600	18458	83896	79.94	100.00	100.00	10.09
Ezhou	1504	106.82	40.99	47.30	2697900	26142	53621	61.35	99.80	100.00	11.37
Jingmen	12404	300.11	79.99	48.53	5203600	18309	13613	79.83	99.35	100.00	10.29
Xiaogan	8910	525.06	152.31	32.50	5930600	12698	32861	80.37	98.85	97.39	9.15
Jingzhou	14205	658.50	163.53	64.88	6239800	9554	27262	52.75	99.97	100.00	6.03
Huanggang	17446	735.14	167.26	28.52	6007500	6520	33210	70.19	91.55	100.00	10.47
Xianning	9861	288.21	78.23	30.80	3591900	14299	30923	30.95	92.59	96.55	13.59
Suizhou	9636	256.11	50.63	43.00	3102000	14074	6570	47.38	100.00	97.42	8.67
Hunan Province											
Changsha	11819	645.14	234.45	242.78	30009795	45765	1433136	60.28	100.00	100.00	8.66
Zhuzhou	11276	383.04	102.41	89.58	9095676	24563	235430	63.89	100.00	92.01	8.21
Xiangtan	5015	293.99	82.50	72.65	6547824	23673	154762	60.01	100.00	97.11	8.34
Hengyang	15303	731.14	311.25	93.00	10000859	14858	84734	39.93	100.00	100.00	8.85
Shaoyang	20830	754.09	112.26	47.00	5615709	8332	82753	38.00	100.00	95.11	7.71
Yueyang	15087	551.51	248.15	78.60	11057360	21410	277744	68.00	100.00	95.58	8.75
Changde	18190	614.16	143.25	72.54	10496975	19201	30345	66.65	100.00	97.77	9.33
Zhangjiajie	9516	164.56	29.71	21.75	1839774	12338	55198	55.65	100.00	92.23	7.09
Yiyang	12144	467.66	94.74	50.50	5112770	12223	72094	62.31	100.00	78.37	6.06
Chenzhou	19557	471.00	194.50	41.70	7340633	16668	88423	62.00	100.00	91.58	7.35
Yongzhou	22441	580.16	93.12	54.10	5926853	11551	59505	34.13	100.00	99.05	5.33
Huaihua	27624	508.94	95.14	40.00	5037856	10950	117089	42.16	100.00	93.09	7.98
Loudi	8117	423.79	89.63	41.00	5284038	13509	56570	52.18	100.00	95.05	8.31
Guangdong Province											
Guangzhou	7434	784.14	704.17	895.00	82158151	81233	2039003	75.09	100.00	99.71	9.72
Shaoguan	18463	323.09	124.80	78.30	5458677	18503	11703	67.74	100.00	97.87	11.58
Shenzhen	1953	228.07	228.07	787.90	78065387	89814	263053	62.67	94.17	80.79	16.20
Zhuhai	1701	99.48	99.48	118.34	9920616	67591	138547	66.85	72.16	98.84	12.92
Shantou	2064	506.57	502.01	170.39	9747835	19384	65829	31.10	64.01	98.75	11.75

Name of cities	Landarea of City's dministrative (km²)	Total opulation (year-end) (10 thousand)	Non-agricultural Population (10 thousand)	Area of Built-up District (km²)	Gross Regional Product (10 thousand yuan)	Per Capita Gross Regional Product (yuan)	Fixed Assets Investment in Urban Sevice Facilities (10 thousand yuan)	Wastewater Treatment (%)	Domestic Garbage Treatment (%)	Water Coverage (%)	Per Capita Public Recreational Green Space (m²)
Foshan	3848	364.34	364.34	149.98	43333044	72975	341706	79.15	94.53	100.00	8.10
Jiangmen	9541	389.93	219.77	113.75	12805877	30973	87123	33.34	100.00	96.91	7.50
Zhanjiang	13225	753.88	278.88	77.23	10486608	15297	21689	62.88	97.33	99.12	12.50
Maoming	11458	725.67	270.91	67.40	12178395	16889	990	64.82	95.32	100.00	9.16
Zhaoqing	15134	410.28	117.88	70.96	7158542	18951	67925	71.01	96.65	99.90	21.14
Huizhou	11158	318.84	186.20	132.03	12903608	33077	151331	59.64	86.48	92.94	8.15
Meizhou	15870	505.28	124.71	33.37	4778840	11604	3940	83.11	100.00	95.45	11.69
Shanwei	5271	335.99	167.35	13.40	3502293	12130	11600		101.22	91.55	3.60
Heyuan	15826	346.64	83.02	26.90	3941331	13860	2567	64.61		91.31	8.41
Yangjiang	7946	273.29	114.34	40.10	4838439	20479	8835	97.16	77.60	95.49	9.19
Qingyuan	19153	405.80	111.57	41.84	7466166	20205	23948	38.18	100.00	99.01	6.46
Dongwan	2465	174.87	76.80	681.86	37025344	53285	386466	84.95	97.34	99.93	12.12
Zhongshan	1800	146.43	77.26	86.10	14085194	56106	63009	93.08	100.00	100.00	8.70
Chaozhou	3100	256.13	74.20	41.68	4427597	17336	19188	76.95	100.00	100.00	10.28
Jieyang	5240	641.24	219.60	47.00	7250296	12679	41186		81.99	97.00	12.22
Yunfu	7779	272.68	100.59	18.60	3198566	13439	556	91.43	100.00	98.45	10.28
Guangxi Zhuang Autonomous Region											
Nanning	22112	691.69	188.94	179.06	13162137	19142	501683	97.06	100.00	100.00	10.29
Liuzhou	18617	364.90	128.45	126.88	9098522	21181	458741	73.10	100.00	99.80	10.70
Guilin	27809	508.32	122.64	59.54	8830250	17435	109941	84.60	100.00	76.74	6.44
Wuzhou	12611	313.20	62.65	36.10	4001238	13115	14556	4.30	90.60	98.96	7.13
Beihai	3337	157.71	46.68	68.80	3138785	20093	32436	58.29	100.00	54.29	3.23
Fangchenggang	6181	84.76	28.58	18.96	2121817	25375	34400		30.09	98.22	4.86
Qinzhou	10843	364.51	41.40	53.78	3774232	11740	122942	84.40	81.67	91.79	5.47
Guigang	10606	501.86	56.49	52.91	3985273	9386	55544	65.81	89.71	100.00	11.69
Yulin	12838	641.73	72.44	52.00	6059167	9267	89137	0.57	100.00	100.00	10.85
Baise	36201	392.37	49.02	31.74	4162366	10037	39983		83.61	99.88	9.19
Hezhou	11855	221.79	31.03	28.85	2528364	12103	13632		87.16	65.45	4.38
Hechi	33508	404.57	57.29	17.20	3673139	9667	20224	97.59	54.13	100.00	3.75
Laibin	13411	252.74	38.03	22.67	2715837	11903	52717	0.12	220.13	100.00	6.12
Chongzuo	17351	240.00	40.66	14.50	2648005	12226	14240			95.90	7.54
Hainan Province											
Haikou	2304	155.82	94.13	91.42	4431808	24420	183621	82.97	100.00	96.50	9.25
Sanya	1915	54.58	27.50	20.00	1443178	30572	37486	67.14	100.00	69.38	9.19
Sichuan Province											
Chengdu	12390	1124.96	612.08	427.65	39009857	30855	1783619	85.19	100.00	94.12	11.43
Zigong	4373	325.58	103.11	53.20	4868510	17348	98412	72.81	74.48	83.26	5.24
Panzhihua	7440	111.18	59.58	54.60	4276138	37278	33610	28.80	93.56	91.92	8.26
Luzhou	12247	493.38	86.56	53.13	5084223	11831	36305	65.31	100.00	77.40	8.02
Deyang	5954	387.37	90.77	44.09	6950411	19084	27016	74.01	100.00	98.41	7.86
Mianyang	20249	540.71	135.69	80.48	7431645	15012	50045	83.57	99.48	93.62	7.99
Guangyuan	16314	310.37	64.45	32.62	2335589	8550	14879	70.61	73.31	90.42	8.08
Suining	5325	384.94	79.93	43.65	3726708	10454	35373	77.94	81.87	83.31	7.71
Neijiang	5386	425.05	84.00	37.00	4882791	12309	11895	33.90	12.06	65.52	2.91
Leshan	12826	353.50	95.70	49.82	5623939	16737	13029	49.80	83.72	86.83	7.23
Nanchong	12479	749.49	150.10	64.05	6019472	9687	36620	42.51	81.69	97.11	8.63
Meishan	7186	346.58	86.55	40.40	4127098	13716	9648	64.16	100.00	87.46	11.47
Yibin	13283	530.81	96.53	49.04	6458619	14489	70204	11.88	78.79	78.59	14.64
Guangan	6344	466.45	74.68	21.00	4049030	10862	27928	87.46	88.28	85.00	14.68
Dazhou	16591	655.97	121.69	23.20	6039863	10580	23638	51.98	84.23	97.58	11.89
Yaan	15302	154.54	34.60	20.40	2132237	14051	7562	52.29	92.78	99.43	7.88
Bazhong	12301	398.57	69.65	16.32	2137624	6806	8919	61.94	71.91	83.67	8.23
Ziyang	7962	497.15	72.00	28.30	4676250	11068	28829	80.00	95.15	88.96	6.26

Name of cities	Landarea of City's dministrative (km^2)	Total opulation (year-end) (10 thousand)	Non-agricultural Population (10 thousand)	Area of Built-up District (km^2)	Gross Regional Product (10 thousand yuan)	Per Capita Gross Regional Product (yuan)	Fixed Assets Investment in Urban Sevice Facilities (10 thousand yuan)	Wastewater Treatment (%)	Domestic Garbage Treatment (%)	Water Coverage (%)	Per Capita Public Recreational Green Space (m^2)
Guizhou Province											
Guiyang	8034	363.93	181.42	132.00	8110521	20638	254872	41.74	93.36	93.43	9.58
Liupanshui	9974	312.97	69.08	38.00	3842663	12944	12402	64.11	100.00	95.77	2.54
zunyi	30762	744.02	115.45	51.00	6557276	9570	23255	41.00	85.60	96.37	4.92
Anshun	9267	270.30	41.34	31.50	1676482	6617	25563		100.00	73.17	1.27
Yunnan Province											
Kunming	20832	528.52	222.37	280.20	15116795	25826	255116	72.98	97.13	99.88	7.06
Qujing	28904	608.09	76.36	37.00	7875678	13684	160350	90.01	100.00	88.68	7.61
Yuxi	15285	212.98	38.00	22.60	5960973	26260	26790	79.31	88.00	99.48	10.68
Baoshan	19637	248.22	27.09	18.60	1940496	7898		35.71	61.28	86.42	4.32
Zhaotong	22666	549.52	45.56	22.50	2722801	5162	51978	55.18	55.00	89.67	3.27
Lijiang	21219	119.49	17.55	22.00	1011490	8301	9880	66.64	100.00	87.61	27.61
Simao	45385	258.10	32.27	20.00	1798569	6975	1347	37.67	100.00	82.26	2.17
Lincang	24469	224.66	24.52	12.18	1568740	6605	7326		50.00	81.53	1.95
Tibet Autonomous Region											
Lasa		47.72	19.41	59.00	1420500	20404	24968		94.81	96.39	3.32
Shaanxi Province											
Xian	10108	772.30	363.87	272.71	21900400	26259	1681700	65.12	90.35	100.00	7.80
Tongchuan	3882	85.06	40.26	37.36	1286500	15362	30800	59.02	98.65	92.12	7.61
Banji	18172	377.95	95.25	71.35	7140700	18992	61300	89.66	100.00	99.83	12.45
Xianyang	10196	510.45	110.63	54.55	7645560	15286	37098	70.29	100.00	98.95	9.49
Weinan	13046	551.88	162.65	38.20	4897150	9535	10283	99.88	99.50	99.17	7.61
Yanan	37037	223.31	61.09	25.95	7132720	33332	9372	70.74	81.67	84.99	8.53
Hanzhong	27215	380.14	75.56	31.00	3526120	10049	3317	96.00	38.46	81.97	14.29
Yulin	43578	353.12	64.68	36.00	10082610	30243	106031	58.66	96.48	94.69	5.44
Ankang	23529	301.87	47.66	29.00	2336744	8802	33810			86.38	11.20
Shangluo	19292	242.48	39.85	13.10	1740360	7291	38790		100.00	85.71	8.93
Gansu Province											
Lanzhou	13085	322.28	201.63	182.88	8462811	25628	333251	61.04	100.00	92.14	9.33
Jiayuguan	2935	18.59	16.52	42.30	1441043	69415	12605	66.57	100.00	100.00	14.29
Jinchang	8896	47.29	22.68	31.58	1944259	41231	15027	64.95	100.00	90.40	15.41
Baiyin	21158	178.06	45.27	51.00	2442835	13954	8494	49.08	51.52	96.69	6.27
Tianshui	14359	357.21	96.79	42.24	2265698	6626	10181	61.32	100.00	75.87	5.46
Wuwei	33238	197.60	35.74	24.64	2101088	11021	1067	83.33	94.00	88.71	3.94
Zhangye	41924	129.56	35.33	27.83	1698559	13285	3346	77.00	89.88	92.31	12.31
Pingliang	11170	228.23	35.40	36.00	1750618	7982	28806	65.18	96.07	96.67	7.95
Jiuquan	193974	95.80	33.10	36.00	2480173	24759	16435	66.00	82.87	72.73	8.34
Qingyang	27119	258.23	31.21	16.34	2484991	9872	13040	32.39	88.39	96.22	2.97
Dingxi	20330	297.81	31.75	22.83	1056400	3602	21119	71.15	62.79	89.39	9.17
Longnan	27915	277.44	42.27	6.59	1216011	4396	12232		100.00	48.73	1.30
Qinghai Province											
Xining	7649	217.79	115.05	64.92	4221885	19494	101232	53.78	92.70	100.00	9.25
Ningxia Hui Autonomous Region											
Yinchuan	9555	152.27	98.13	110.77	5141138	31436	101733	87.61	100.00	89.03	8.40
Shizuishan	5310	74.04	44.20	94.20	2287270	32102	68283	31.11		100.00	21.50
Wuzhong	20394	135.68	41.23	24.49	1729879	12982	30512	89.91	98.78	85.64	14.31
Guyuan	12849	148.36	20.59	31.95	757929	5108	8775	74.03	43.96	73.29	3.00
Zhongwei	17391	114.17	27.30	25.78	1191009	10498	9467	89.94	82.72	67.40	11.07
Xinjiang Uygur Autonomous Region											
Urumuchi	14216	236.05	174.48	302.80	10203488	37343	211596	58.98	91.75	86.27	6.00
Kelannayi	9548	38.62	26.83	53.29	6612062	100216	107064	91.15	100.00	100.00	8.72

3 Statement on the Basic Data of "The State of China's Cities"

I. Data Sources

Department of Urban Social and Economic Survey of National Bureau of Statistics, *China City Statistical Yearbook-2009*, China Statistics Press, Beijing, February 2010

Department of Comprehensive Statistics of National Bureau of Statistics, *China Compendium of Statistics 1949-2008*, China Statistics Press, Beijing, January 2010

Department of Planning, Finance and Foreign Affairs of the Ministry of Housing and Urban-Rural Development, P.R.China, *China Urban Construction Statistical Yearbook (2008)*, China Planning Press, Beijing, September 2009

National Bureau of Statistics of the People's Republic of China, *China Statistical Yearbook -2009*, China Statistics Press, Beijing, September 2009

II. Explanation of Indicators

1. National Total Population year-end

(1)Total Population refers to the total number of people alive at a certain point of time within a given area.

The annual statistics on total population is taken at midnight, the 3lst of December, not including residents in Taiwan province, Hong Kong SAR and Macao SAR and Chinese national residing abroad.

(2)Urban Population and Rural Population Urban population refers to all people residing permanently in cities and towns, while rural population refers to population other than urban population.

- *China Statistical Yearbook-2009*, p. 107-108

(3)The national total population include the military personnel of the Chinese People's Liberation Army who are classified as urban population.

- *China Compendium of Statistics 1949-2008*, p. 6

2. Employed Persons Refer to persons aged 16 and over who are engaged in gainful employment and thus receive remuneration payment or earn business income. This indicator reflects the actual utilization of total labour force during a certain period of time and is often used for the research on China's economic situation and national power.

3. Registered Unemployed Persons in Urban Areas Refer to the persons with non-agricultural household registration at certain working ages (16 years old to retirement age), who are capable of working, unemployed and willing to work, and have been registered at the local employment service agencies to apply for a job.

4. Registered Unemployment Rate in Urban Areas Refers to the ratio of the number of the registered unemployed persons to the sum of the number of persons employed in various units (minus the employed rural labour force, re-employed retirees, and Hong Kong, Macao, Taiwan or foreign employees), laid-off staff and workers in urban units, owners of private enterprises in urban areas, owners of self-employed individuals in urban areas, employees of private enterprises in urban areas, employee of self-employed individuals in urban areas, and the registered unemployed persons in urban areas.

- *China Statistical Yearbook-2009*, p. 162-165

5. Gross Domestic Product (GDP) Refers to the final products at market prices produced by all resident units in a country (or a region) during a certain period of time.

For a region, it is called as Gross Regional Product(GRP) or regional GDP.

- *China Statistical Yearbook-2009,* p. 79, 82

6. Disposable Income of Urban Households Refers to the actual income at the disposal of members of the households which can be used for final consumption, other non-compulsory expenditure and savings. This equals to total income minus income tax, personal contribution to social security and subsidy for keeping diaries in being a sample household. The following formula is used:

Disposable income = total household income - income tax - personal contribution to social security - subsidy for keeping diaries for a sampled household

7. Net Income Refers to the total income of rural households from all sources minus all corresponding expenses. The formula for calculation is as follows:

Net income = total income - taxes and fees paid - household operation expenses - taxes and fees depreciation of fixed assets for production - gifts to non-rural relatives

Net income is mainly used as input for reinvestment in production and as consumption expenditure of the year, and also used for savings and non-compulsory expenses of various forms. "Per capita net income of farmers" is the level of net income averaged by population, reflecting the average income level of rural households in a given area.

- *China Statistical Yearbook-2009*, p. 353-355

8. Consumption of Water for Residential Use Refers to water consumption of households for daily life and water consumption of public service facilities. The latter refers to water consumption for urban public services, including the consumption of government agencies and public institutions, military barracks, public facilities, wholesale and

retail outlets, restaurants, hotels, and other units providing public services. Household water consumption refers to consumption of water for daily life of all households within the boundary of cities, including households of urban residents and farmers, and public water supply stations.

9. Coverage Rate of Urban Population with Access to Tap Water Refers to the ratio of the urban population with access to tap water to the total urban population. The formula is:

$$\text{Coverage of urban population with access to tap water} = \frac{\text{Urban population with access to tap water}}{\text{Urban population}} \times 100\%$$

10. Length of Urban Sewage Pipes Refers to the total length of general drainage, trunks, branch and inspection wells, connection wells, inlets and outlets, etc.

11. Coverage Rate of Urban Population with Access to Gas Refers to the ratio of the urban population with access to gas to the total urban population at the end of the reference period. The formula is:

$$\text{Coverage rate of urban population with access to gas} = \frac{\text{Urban population with access to gas}}{\text{Urban population}} \times 100\%$$

- *China Statistical Yearbook-2009*, p. 377-378

12. Landarea of City's Administrative Area Refers to the total area of the land (including water area) within the administrative division. The land area shall be calculated on the basis of the administrative division.

- *China City Statistical Yearbook-2009*, p. 481

13. Non-agricultural Population The non-agricultural population of the cities at the prefecture level or above (excluding the cities of Shangdong Province at prefecture level or above) is defined as "the population supported with non-agricultural occupations and the population they foster, for whom the statistical caliber of classifying permanent residence into the agricultural one and non-agricultural one is adopted."

- *China City Statistical Yearbook-2009*, p. 481

14. Area of Built-up District It refers to the areas which have been actually developed and built up by lots and basically have municipal public utilities and facilities. In a core city, such area contains the parts integrated into a land lot and several odd areas built up into lots and basically having municipal public utilities and facilities. In a city containing a number of towns, such area is composed of several adjacently developed areas that basically have municipal public utilities and facilities. Therefore, the scope of a built-up district generally refers to the areas includable by the external contour line of the built-up district, i.e., the scope reached by the city's actual land used for construction.

- *China Urban Construction Statistical Yearbook (2008)*, p.787

15. Wastewater Treatment Rate Refers to the ratio of the total sewage treatment volume to the total sewage discharge volume within the report period. The formula is:

Sewage Treatment Rate = Total Sewage Treatment Volume/ Total Sewage Discharge Volume×100%

- *China Urban Construction Statistical Yearbook (2008)*, p.786

16. Domestic Garbage Treatment Rate Refers to the ratio of the domestic garbage treatment volume to the domestic garbage generation volume within the report period. The formula is:

Domestic Garbage Treatment Rate = Domestic Garbage Treatment Volume/ Domestic Garbage Generation Volume ×100%

When the statistics is made, the domestic garbage generation volume is not easy to be obtained and thus is substituted by the garbage collection and transportation volume.

- *China Urban Construction Statistical Yearbook (2008)*, p.787

17. Per Capita Public Recreational Green Space Refers to the per capita green area in public space and parks within urban areas at the end of the report period. The formula is:

Per Capita Public Recreational Green Space = Green Area in Public Space and Parks within Urban Areas/ (Urban Population + Urban Temporary Population)

- *China Urban Construction Statistical Yearbook (2008)*, p.787

Note: At present, due to the different paces of the permanent residence registration reform in different cities, some regions have completely included the temporary-residence population into the local population for administration, while some other regions still maintain the existing residence registration system which excludes the temporary-residence population. As a result, the concepts of total populations of different cities vary largely. Therefore, the definition of total population in this statistics and those of all per capita indices calculated on that basis mainly comes from *China City Statistical Yearbook-2009*, which might be somewhat different from the statistical data of other sources, and is only used for reference.

4 Winners of China Habitat Environment Award, 2001-2009

Year	Winning Cities	Province
2001	Shenzhen	Guangdong Province
	Dalian	Liaoning Province
	Hangzhou	Zhejiang Province
	Shihezi	Xinjiang Autonomous Region
	Nanning	Guangxi Autonomous Region
2002	Qingdao	Shandong Province
	Xiamen	Fujian Province
	Sanya	Hannan Province
2004	Haikou	Hannan Province
	Yantai	Shandong Province
	Yangzhou	Jiangsu Province
2005	Weihai	Shandong Province
2006	Shaoxing	Zhejiang Province
	Zhangjiagang	Jiangsu Province
2007	Kunshan	Jiangsu Province
	Rizhao	Shandong Province
	Langfang	Hebei Province
2008	Nanjing	Jiangsu Province
	Baoji	Shaanxi Province
2009	Anji County	Zhejiang Province

5 Chinese Winners of UN-HABITAT Scroll of Honour, 1990-2009

Year	Winner	Achievements
1990	Tangshan Municipal Government	For post-earthquake redevelopment
1992	Shenzhen Housing Bureau	For innovative provision of housing for low-income families
1995	Shanghai Municipal Housing Project	For redevelopment of slum areas
1996	Mr. Hou Jie, Minister of Construction	Special Citation
1997	Mr. Huang Ziqiang, Mayor of Zhangshan	For his outstanding contribution to integrated environmental improvement in Zhongshan
1998	Chengdu	For comprehensive revitalization of Fu and Nan rivers
1998	Mr. Mu Suixin, Mayor of Shenyang	For his contribution to the implementation of the Shenyang Sustainable Project
1999	Mr. Bo Xilai, Mayor of Dalian	For his outstanding contribution to housing improvement and sustainable urban development in Dalian
2001	Hangzhou Municipal Government	For great improvement in housing and infrastructure
2002	Baotou Municipal Government	For improvements in shelter and urban environment
2003	Weihai Municipal Government	For improvements in shelter and urban environment
2004	Xiamen Municipal Government	For enabling residents of Xiamen City to access decent homes in an healthy environment
2005	Yantai Municipal Government	For transforming Yantai into a safer, greener and better serviced city
2006	Yangzhou Municipal Government	For conservation of the old city and improvement of the residential environment
2007	Nanning Municipal Government	For developing China's first Integrated City Emergency Response System
2008	Nanjing Municipal Government	Special Citation, for its bold, distinct, exemplary and comprehensive redevelopment, revitalization and improvement
	Shaoxing Municipal Government	For preserving a unique cultural and historical heritage at a time of rapid urbanization
	Zhangjiagang Municipal Government	For setting a new trend in integrated urban-rural development and management
2009	Rizhao Municipal Government	For transforming their city into a green home with new housing and infrastructure

Emphasizing the Creation of a National Garden City and Endeavouring to Create an Ecologically Liveable Mountainous City

City in the Forest

Yangquan is located in the eastern of shanxi Province, and is an emerging industrial city. The Taohe River penetrates through the urban area. With mountains and rivers inside, Yangquan has rich mineral resources, a pleasant climate, and is known as the "land of coal and iron". Yangquan is one of China's largest anthracite coal production bases, and one of the three major bauxite production bases. With a population of more than 1.3 million, Yangquan has a jurisdictional area of 4570 square kilometres, and there are two counties (namely, Pingding and Yu) and four districts (namely the urban district, the mining district, the suburban district and the economic & technological development zone) under its jurisdiction.

Yangquan is in the mullock mountainous area of Taihang Mountain. It has severe natural conditions and few plants. Meanwhile, as a resource-heavy city and a coal chemical base, the long-term coal mining has heavily destroyed the ecological environment. The environmental problems such as air pollution, water and soil loss, destruction of underground water and sinking of the ground surface of the coal mining area are seriously affecting the construction of a harmonious Yangquan and restrict sustainable economic and social development. In recent years, guided by the important thought of "Three Represents", Yangquan controlled the situation through scientific development, and strived to "develop Yangquan into a modern regional centre which has fine ecology, may serve as a safe and harmonious liveable home, and has powerful competitive strength". According to the principles of "being organized by the government, making uniform planning, adapting to local conditions, welcoming the general public's participation, highlighting the characteristics and seeking effects", Yangquan adheres to "strict planning, high-standard construction, and efficient management", makes full use of the unique natural resources such as the mountains, rivers and roads, and

carries out the ecological environment construction of creating a national garden city on a large scale by taking the opportunities of rebuilding urban villages, construction of new countryside, coal mullock treatment, greening along railways and highways, enlargement of the city capacity and improvement of the city quality.

In recent years, we endeavour to overcome many contradictions in city construction in respect of the land, funding, relocation, etc., and try every way to settle important and difficult problems. By building up parks and green belts with great efforts, improving the scenic views along the roads, creating garden-like residential areas, promoting environmental protection and strengthening the construction of municipal infrastructures, we are continuously improving the city's greening level and its image. Firstly, we built up parks and green belts with great efforts. We successively built up a number of major public green belt squares including: Taohe Park, Beishan Park, Yangmei Riverfront Park, Baojin Cultural Park, the Municipal Cultural Center Sqaure, New Quanguan Sqaure, Yueqin Park, Tongyu Park, Sakura Park, Peony Park and have formed a green belt system which is composed of connected green belts. Secondly, we successively accomplished more than 20 road-greening projects including the: Taobei West Road Greening Project, Saixi Road Greening Project, Yibai Road Greening Project, South Outer Ring Road Greening Project, Xincheng Avenue Greening Project and have preliminarily formed urban road greening scenic views. Thirdly, we went deep into carrying out the activities of making garden-like entities and residential areas to reach the greening standards. By way of exchange of experiences, typical leading, encouragement and publicity, etc. for several years, Yangquan makes the creation of garden-like entities and residential areas to be deeply rooted among the people, and a large group of garden-like entities and residential areas have arisen. Fourthly, we made more efforts on passage-greening and city-surrounding greening work. While rebuilding the old urban areas, we successively organized and implemented the greening projects of some major passages such as: Saixi Road Scenic Forest Greening Project, Shinaoshan Road Side Scenic Forest Greening Project and the No. 307 Double-Line Greening Project by demolishing unlawful buildings and planting trees and grasses as much as possible and therefore further expanded the greening space of the city. Fifthly, we strengthened the treatment of the ecological environment and the construction of urban infrastructures. We focused on implementing the thermal-power concentrative heating supply project, the urban gas project, the coal facility rebuilding project, the motor vehicle pollution control project and the project of prohibiting coal burning in the urban catering industry. The urban concentrative heating supply rate is more than 90%, the urban gas popularization rate has reached 86.6%, and the city's innocuous treatment rate of domestic garbage has reached 91.02%. During the whole year, there are 353 days when the city's air quality reaches or exceeds Level II, the urban water supply popularizing rate has reached 100%, the comprehensive conformity rate of water quality has reached 99.68% and the city's sewage treatment rate has reached 82.24%. Especially, since 2005, we have carried out the large-scale comprehensive mullock treatment project. With more than four years of efforts, Yangquan has invested a total of 220 million Yuan, accomplished the tasks of 4300 mus of mullock treatment at 26 locations. The previous "hot mountain" is now dressed in green, and Yangquan is taking a lead in China, in respect of treating its mullocks scientifically.

Monument of the Great Battle of Hundred Regiments

Spring is Full of the Garden

Beishan Park

Forest City of Landscape — Liaoyuan

Liaoyuan, a small city in the east of Shanhaiguan, has green mountains, clear water, pleasant sceneries and a fine ecological environment, and is a wealthy and beautiful city.

Liaoyuan is located at the southeast of Jilin Province, the ending section of Changbai Mountain and the transiting zone of Songliao Plain. It has beautiful mountains and clear waters, an excellent ecological environment, and deep cultural deposits. In the Qing dynasty, it was a paddock in Shengjing where a deer official was appointed to take charge of sika deer tributes to the royal court. Since the government of Qing dynasty established Liaoyuan County in 1902, the people in Liaoyuan gave priority to urban planning. The county is located against a mountain and faces a river, with Yin at the back and Yang in the front, so as to gather the Qi coming from the southeast. The people living at that time also considered Longshou Mountain as the Long Mai, and built up Kuixing Building, so that some of them would capable of passing the imperial examinations. They considered Dongliao River as the exit of water and Lishuhe Alluvial Plain as the exit of Qi, and in this way, the county is supported by mountains and rivers, so as to gain a momentum of preserving wind and having water.

The Open Space for Citizens' Recreations, Entertainments and Sports - People's Sports Center.

Modern Garden-like Habitation Area with Unique Architectural Design and Pleasant Environment.

Liaoyuan throve for coal,and declined for coal, too. It is a typical resource-exhausted city. In 2006, Liaoyuan Municipal Party Committee and the Municipal Government seized opportunities, and was initially listed in the first group of 12 experimental cities of resource-pattern economic transformation in China. In the transformation process, the city transformation and the economic transformation were implemented simultaneously, and the economic and industrial structures were optimized by way of economic transformation; while the development space of the urban area was enlarged and the competitive force of the city was enhanced through city transformation. In respect of economic transformation, the development position of 6 succeeding and substituting industries (i.e., new materials, new energy, biological health, equipment manufacturing, metallurgy & building materials and socks textiles) was specified. The unique transformation policies were noticed by investors. The development was full of vitality and vigor, and successfully shook off traditional development modes.

A new industrial development layout has been formed. When facing the severe challenges brought by international financial crisis, the Municipal Party Committee and the Municipal Government seized up the situation, converted the crisis into an opportunity, made a strategic layout of city development, and established the positioning of creating an important industrial city in the southeast of Jilin Province, a satellite city of Changchun, and a ecologically livable city combining mountains, rivers and forests.

The city construction mostly embodies Liaoyuan's unique regional characteristics, cultural characteristics and industrial characteristics. The city development strategic planning has been made, according to the objective of keeping not backward for 50 years,the urban space planning of "one core, two axes, three districts and seven nodes" has been constructed, and a scientific and prospective planning system of overall consideration and urban-rural integrated development has been formed. In terms of city construction, Liaoyang stresses excavating historical and cultural deposits and creating a well-arranged city pattern where the habitat environment and the ecology

People may visit and tour the scenic belt of Liaohe River, and fully enjoy the wonderful recreational times.

As a road network composed of three ring roads, four north-to-south roads and six west-to-east roads reaches out in all directions, the traffic is convenient and quick.

is harmonious with each other, the city is combined with forests, mountains and rivers which are integrated with and penetrate through each other. According to the network-based development strategy of "one axis, one belt, one center, a number of clusters", Liaoyang always rebuilds the old urban areas and develops the new areas simultaneously, and has managed to make overall planning and will be fully covered with the regulatory detailed planning. By stressing the quality of special planning, it has created good images of single plan and a fine style entirely. On that base, the Municipal Party Committee and the Municipal Government emphasizes the project of people's livelihood, make and implement plans with greater efforts, and contributes more investments, as well. They also rectify subsidence areas and rebuild shanty areas at large scales. From 2006 to 2008, 48000 households were relocated back to the rebuilt areas. In 2009, the relocation work continued powerfully, 9699 households were relocated to 485,000 square meters of rebuilt shanty areas, and 660,000 square meters of dwelling for back relocation to the rebuilt shanty areas were constructed. 4 coal mining subsidence areas under comprehensive management were constructed; 1,331,000 trees were planted in the urban area, 142 green belts were built or rebuilt, 466.01 hectares of green belts were added, and both the urban green coverage rate and the green belt rate have reached 30%. Meanwhile, Liaoyuan organized and implemented the infrastructural construction projects at the largest city construction scale in history, with the largest amount of investments, and involving the widest coverage. 56 roads have been built, broadened or rebuilt, and a road network composed of three ring roads, four north-to-south roads and six west-to-east roads has been formed. 4 parks and 3 cultural recreation squares have been newly built or rebuilt for visitors and for holding activities frequently, just like a beautiful painting of the age of harmony and prosperity. In addition, a number of major scenic spots and natural preservation areas will also become an important symbol of Liaoyuan.

In today's Liaoyuan, the buildings stand in great numbers but in different styles, the urban roads are wide and unimpeded, while the greening and illuminating effects are highlighted. Liaoyuan has now a population of 1.3 million including an urban population of 500,000, and its urban area has reached 86 square kilometers. In China, it is the well-known land of sika deer, land of peasant paintings, land of paper-cuts, land of Er Ren Zhuan, land of Pipa, and land of cotton socks. The city's savour is improved, its capacity of gathering and absorbing production factors is enhanced distinctively, and the people's happiness index is greatly uplifted. A garden city of fine ecology, which depends on and displays its mountains and rivers has its preliminary scale. In July 2009, the national work conference on sustainable development of resource-based cities was held in Liaoyuan, and Liaoyuan's experience in transformation was affirmed by the leaders of some ministries and commissions of the Central Government. Liaoyuan is praised as one of the "cities of the greatest development potential" at the national conference of city brands!

Longyan Is Promoting Great-leap-forward Development of the Urban System with All Its Strength

Bird's-eye view of the central city area of Longyan City

As one of the nine cities of Fujian Province divided into districts, Longyan City is located at the junction of Fujian Province, Guangdong Province, and Jiangxi Province, which is generally called "Minxi (the west of Fujian Province)", and to the west bank of Taiwan Strait. There are seven counties/cities/districts with a total area of 19,000 square kilometers and a total population of 2,933,000 under the administration of Longyan City. Longyan City is an important traffic hub for expanding the economic region of the west bank of Taiwan Strait to the north and the south, connecting the Yangtze River Delta and Pearl River Delta, and expanding economy to the central region of China.

In recent years, Longyan City has been energetically promoting the urban infrastructure construction with "Green, Bright, and Beautiful" projects as the focus according to the construction requirements of speeding up the construction of industries, infrastructure, and the "Three Systems" of the city on the principles of "City Expansion, Reconstruction, Perfection, and Improvement", aiming at planning, gathering, managing, and constructing businesses, logistics, and dwelling. By the end of 2009, Longyan City had completed 36.8 square kilometers of built up area in the central city, an increase of 5.2 square kilometers compared with 2006; had a total urban road length of 317.9 kilometers, an increase of 32.9 kilometers compared with 2006; and achieved a green coverage ratio of 39.13% in the built up area, increasing by 3.81% compared with 2006. By means of continual expansion of urban development space and improvement of city quality, the construction of the central city has effectively pushed forward the interactive cycle of industrialization and urbanization and the harmonious growth of economic society of Longyan City.

I. Construction of the road network and set-up the framework of urban road network

The political center and economic center of the central city extending to the west, south, and north as the "Ten-mile Road and New Cities at Two Wings" are developed and constructed and the Longyan Economic and Technological Development Zone and Longzhou Industrial Development Zone expands and extends. The road network pattern of the new built up area of Longyan City has taken initial shape as the road network expands, which has promoted the stream of people and materials of the economic and technological development zones at the levels of city and district, increased the price of land around the new built up area, and thus good social and economic benefits have been achieved and interactive cycle of industrialization and urbanization has been sped up.

II. Landscaping for improving the life quality

1. The urban landscaping level has been increased constantly. A comprehensive urban landscaping system with reasonable distribution and complete functions has formed basically.

2. The urban environmental hygiene has been improved obviously. There are 20 refuse transfer stations and 49 public toilets in the central city. The Huangzhukeng Garbage Disposal Plant can dispose 380 tons of garbage a day and all the garbage produced by the central city can be totally disposed by it on the same day when it is produced, thus the Huangzhukeng Garbage Disposal Plant has been honored with the title of "The First-class Innoxious Garbage Disposal Plant" by the Ministry of Housing and Urban-Rural Development.

3. The reform of public utilities has achieved remarkable results. Public bidding has been adopted to realize marketized cleaning of the roads, marketized transportation of the garbage, and marketized maintenance of the road lamps and drainage ditches of the central city; the construction and operation of the three areas of urban gas pipeline have been franchised; the management and maintenance of the landscaping has been separated; and liquefied gas stations and outdoor advertisings of the central city area are operated through public auctions.

4. The development strategy of giving priority to public transport has been actively implemented. 30 to 50 new environmentally friendly hybrid buses are updated every year and the number of buses has increased to 225 from 180 in 2006. It is anticipated that by the end of 2010, the contribution rate of buses will be between 20% and 25%, there will be at least 320 buses in total; ten thousand people will share at least 12.09 buses, and environment-friendly and comfortable buses with air conditioning will account for at least 75% of total buses.

III. Housing construction for realizing the goal that every resident has his own house

According to statistics, 11 residence communities, each of which covers an area of over 50 mu (a Chinese unit of area, approximately equal to 666.67 square meters), were constructed in the central city during the last three years and the urban per capita housing construction area had increased from 33.5 square meters in 2006 to 35 square meters in 2009. The low-income housing construction has been sped up. According to preliminary statistics, the economically affordable housing of approximate 355,000 square meters and low-rent housing of approximate 42,000 square meters were completed in the central city between 2007 and 2009. It is anticipated that by the end of 2010, Longyan City will build approximate 9,277 sets of low-income housing, including the economically affordable housing in Liandong, to basically resolve the housing problems of the low-income families in the central city and realize the goal that every resident has his own house.

IV. Construction of social undertakings for building a new city image

In recent years, Longyan City has built many pubic projects, such as the People's Square, which have enriched the cultural and sports life of the masses. The newly built administrative service center and museum have come into service and have thus greatly improved the urban functions and overall quality of the city.

In the future, Longyan City will follow its objectives of "Constructing a New Longyan", plan and construct an eco-friendly and livable central city from the perspective of development, and make Longyan a more beautiful city to realize great-leap-forward development.

Bird's-eye view of Longyan Administrative Service Center (at the People's Square)

Bird's-eye view of Longyan Avenue and the new area

High rise residential housing

Classical City with Modern Rhythm —Xiangfan

Xiangyang Moat is the widest one remained in China, and the widest position is 60 meters wide. After years of rectification, the moat is clear to the bottom now. This is a small part of the moat and Xiangyang's ancient circumvallation.

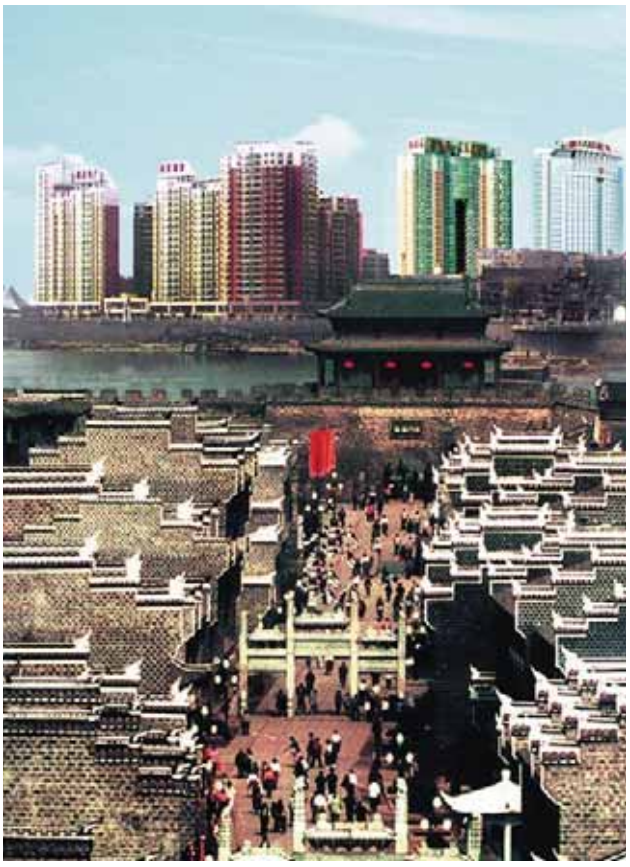
"This is a real city. By depending on steep mountains and a torrential river, it becomes a scenic spot covering miles around, which wins beautiful landscape externally and human culture internally. It was a business center in ancient times, and has nowadays become an important inland traffic and logistics hub. It gathers the essence of the landscape." --- This is what was mentioned in the award speech when Xiangfan won the title of the first group of "Charming Cities in China".

Xiangfan is located in the northwest of Hubei Province, in the middle stream of the Hanjiang River, and at the ending section of Daba Mountain of Qin Ling. Xiangfan is a combined name of Xiangyang (an ancient city) and Fancheng (an ancient wharf). It has a jurisdictional area of 19700 square kilometers with a population of 5.8 million and a built-up area of 1 million square kilometers with a population of 1.2 million, and is now sub-civic center of Hubei Province.

Having been described as "the strategic passage of the north and south" or "a thoroughfare of seven provinces" for long, Xiangfan is an important traffic and logistics hub connecting south with north and east with west. "One Hanjiang River, two airports, three railways and four expressways" constitute a convenient and developed water, land and air traffic system.

Xiangfan has a history of 2800 years as a city, and has cultivated eminent persons in history such as Zhuge Liang, Meng Haoran, Mi Fu, Song Yu and Liu Xiu. There are more than 700 cultural relics and scenic spots around the city. The stories in 32 chapters of the 120 chapters of Romance of Three Kingdoms happened here.

In recent years, Xiangfan actively followed the macro-control policies of the State and the trend of international industrial restructuring, speeded up the paces of structural adjustment, stressed developing advanced manufacturing industries and modern service industries, endeavored to promote the optimization and upgrading of reasonable industrial layout and structure, and enabled the overall national economic caliber and the industrial competitive strength to be improved distinctively. Up to now, an economic development system and commercial circulation pattern with a full range of specialties, sound functions, a reasonable structure and driving strength has been basically formed, a new-pattern industrial system headed by the automobile industry and supported by the industries of electric power, hi-tech, textiles, foodstuff, electronics, building materials, metallurgy and chemicals, etc. has been constructed. As a matter of fact, Xiangfan has become an economic center in the regions adjacent to the medium stream and upstream of Hanjiang River.

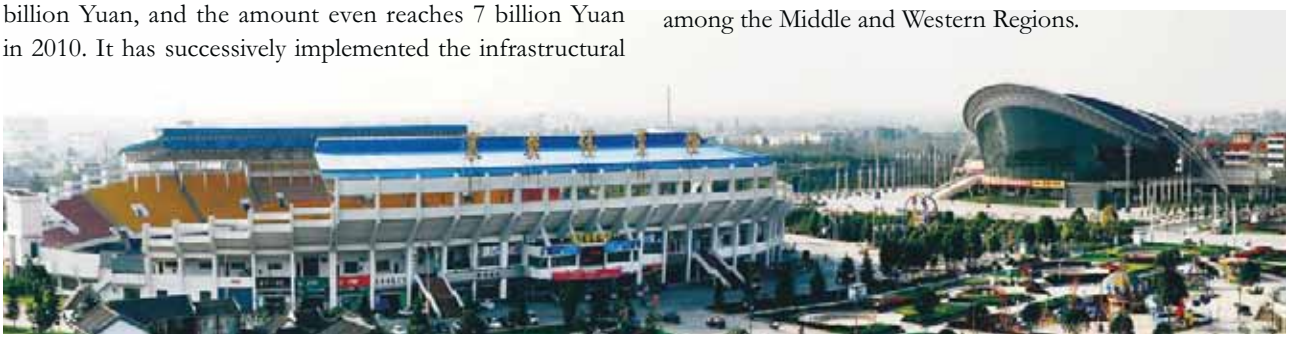


An ancient-style street in Xiangyang.

For the purpose of better promoting the progress of economic and social development, Xiangfan always considers people as the foremost and develops itself in scientific ways. By following the working ideas of "constructing the urban development framework according to generous plans, creating a comfortable and harmonious habitation environment with great efforts, and propelling the sustainable development of urban-rural construction with large-scale management", Xiangfan highlighted three major measures, namely, mechanism adjustment, institutional innovation and policy making, and endeavored to strengthen the base, build up frameworks and make elaborate achievements. Consequently, it has propelled the strong development of the urban planning, construction and management undertakings. Since 2008, Xiangfan's annual average urban construction investments have been over 3 billion Yuan, and the amount even reaches 7 billion Yuan in 2010. It has successively implemented the infrastructural construction projects such as "One Development Zone and Four Industrial Parks", the inner ring road and the outer ring road, rectification of the ancient-city area as well as water supply and sewage discharge system rebuilding with great efforts, endeavored to enrich and strengthen the connotation of urban culture, improved functions of the city, and built up a good platform for supporting the economic and social development. At present, the framework of Xiangfan as a large city has been basically established, the division of functional areas is increasingly improved, the city appearance is much better than before, and the outward attractiveness is enhanced continuously.

In the future urban development, Xiangfan will, by following the guidelines of "expanding the north, optimizing the south, controlling the west and developing toward east" and the pattern of "islet surrounded by five districts, multi-center development", expand the space of the urban development; it will form "One Development Zone and Five Industrial Parks" in the downtown area according to the ideology of intensive industrial development, making infrastructural planning in advance and positioning the functions reasonably; it will endeavor to construct a fully developing new-pattern industrial system dominated and headed by the automobile industry, mainly composed of four major industries (i.e., hi-tech, electric power, textiles and electronic appliances) and other industries such as mechanical manufacturing, foodstuff, chemicals and building materials; it will try to develop itself into one of the traffic hubs in the Middle Regions of China, a regional logistics center, a landscape garden city, a national famous historic and cultural based tourist city, a tourism base of Wudang Mountain and Shennongjia Forestry Area in Hubei Province, a tourism service center in northwest of Hubei, and a production and processing base of agricultural by-products in Hubei Province.

The development objective of Xiangfan is to endeavor to, by 2020, stand upright at the bank of the Hanjiang River as a new vigorous and efficient industrial city, a regional center of balanced development, a livable home of security and ecology, a famous pioneering and innovative cultural city, and an indispensable central city with brand-new appearance among the Middle and Western Regions.



A number of physical exercise and recreation places have been built up in the urban area of Xiangfan. This is the stadium.

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