



Building Affordable Low-Carbon Housing: The Baoji Action

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Overview of Baoji

Located at geometric center of China, 170 kilometers to the west of Xi' an, Baoji is one of the birthplaces of ancient Chinese civilization with a history of 7,000 years of human settlement. With 97.94 square kilometers built-up area and 947,800 population, Baoji is an important industrial city and regional transportation hub on the Eurasian Land Bridge.

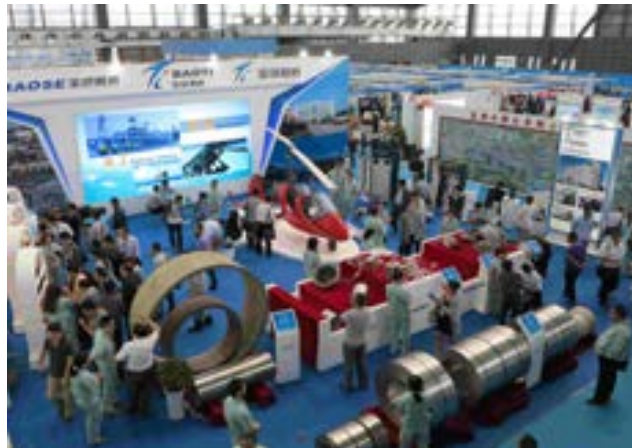


Location

As a regional central city in "One Belt and One Road Initiative", Baoji is located in the transportation center of four provincial capitals, namely Xi'an, Lanzhou, Yinchuan and Chengdu. Three railways and two national expressways meet here. The high-speed road network covers all Baoji counties and districts. The Xi' an-Baoji and Lanzhou-Baoji high-speed railways have been completed and opened to traffic. An airport and five expressways are expected to be built in the near future.



Important Industrial City



As an important industrial city in West China, Baoji is the base of new materials and high-end equipment manufacturing. It has many competitive industrial clusters such as automobile and parts, new materials, high-end equipment manufacturing, tobacco, alcohol and food, intelligent manufacturing etc. Baoji is known as the "Titanium Valley of China" with a titanium output of 80% of the country and 20% of the world.

History and Culture



As a well-known historical and cultural city in China, Baoji is an important cradle of Chinese civilization, which is the hometowns of Zhou dynasty (BC1046–BC256) and Qin dynasty (BC221–BC207). It is the birthplace of the ancient classic books Zhouli and I Ching, which have influenced China for more than 3000 years. Baoji has a flourishing culture with the reputation of "Resort of Buddha's Bone", "Hometown of Bronzes" and "Hometown of Folk Arts and Crafts". The national intangible cultural heritages here include wooden paintings, clay sculptures, embroidery etc.

Ecological Environment



Baoji is in a leading place among the cities in West China in terms of ecological environment. Having Qinling Mountains nearby and Wei river running across the city, Baoji enjoys a garden-like landscape. Furthermore, Baoji is the only national ecological garden city in Northwest China with the reputation of the national garden city and national environment protection model city.

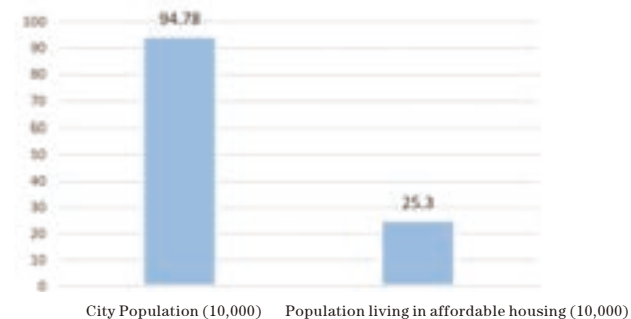
Green Development Classified Provision of Affordable Housing

In accordance with global and national strategies, particularly the SDGs, Baoji had successfully provided affordable housing for 253,000 low-and-middle-income residents which account for a quarter of the city's population thanks to the persistent efforts by government agencies, local residents, financial institutes and NGOs.

Investment Composition of Affordable Housing



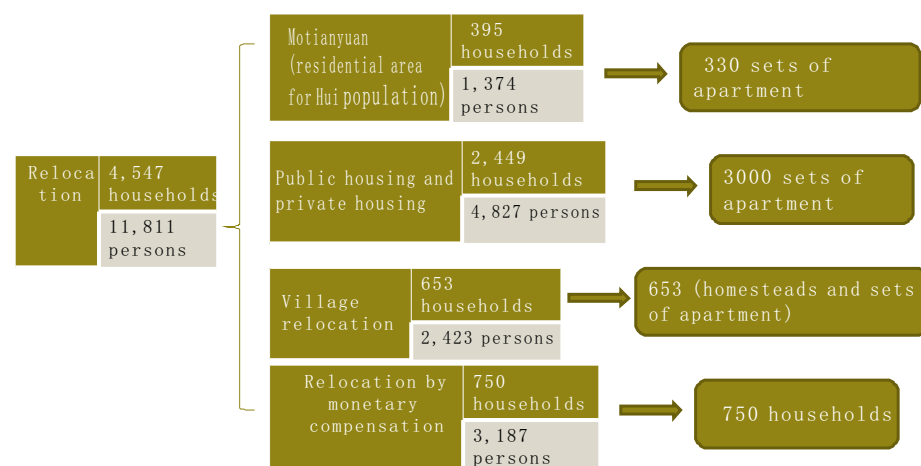
- Subsidies From (central and provincial) governments
- Bonds
- Policy loans (from China Development Bank, Agricultural Development Bank of China)
- Commercial loans (from Huaxia Bank, Bank of Communications and Chang'an bank)
- Enterprise investment
- Self-raised and socialized funds



Relocation of Beipo Shanty Area

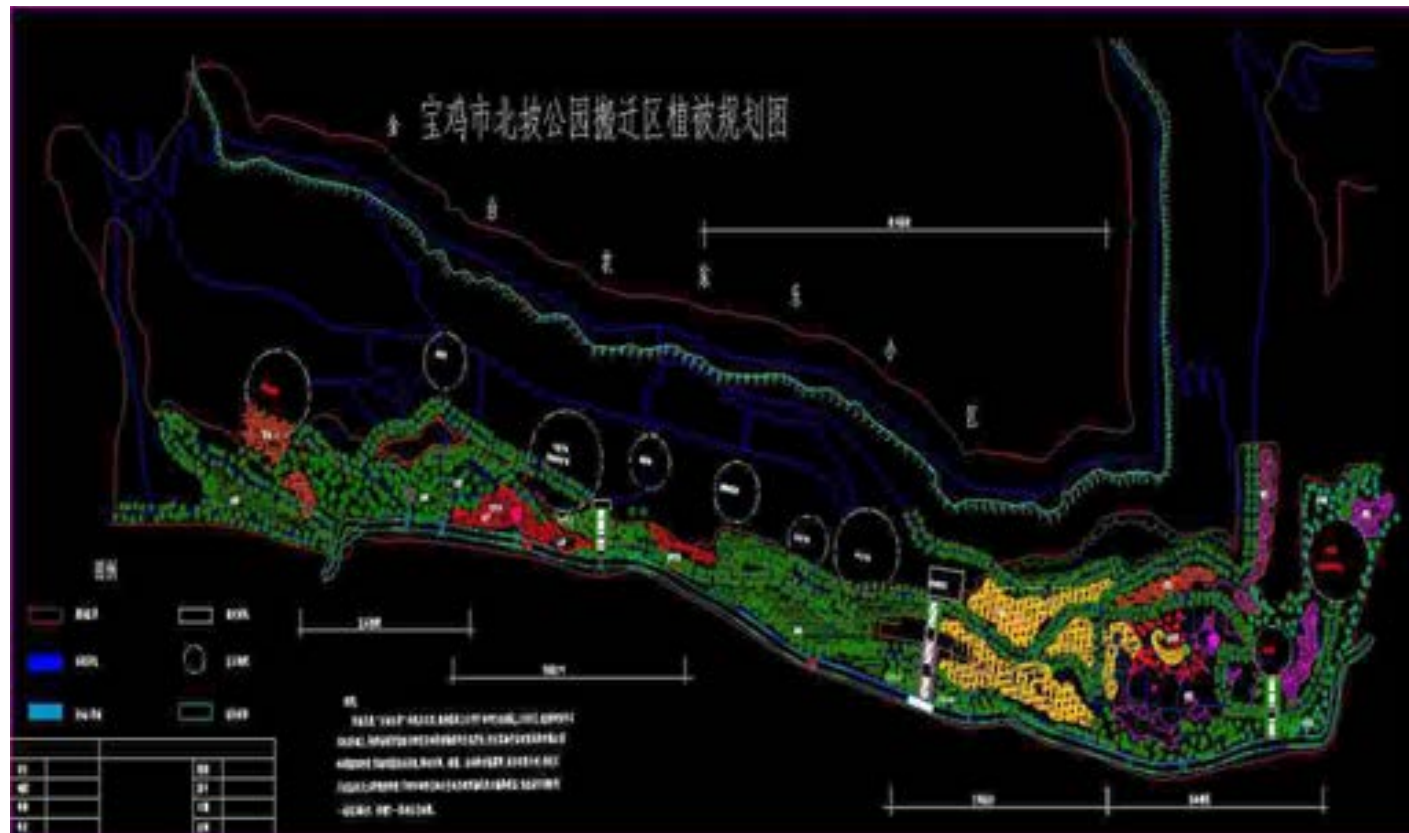


Schematic Diagram of Beipo Relocation Project



Located in the landslide section with safety hazards, the Beipo (North Slope) area is a rundown urban area which have developed since the outbreak of the War of Resistance against Japan in 1937. Now All 11,811 persons of 4,547 households in Beipo have been successfully relocated in safe area after 17 years of persistent work.

Beipo under Renovation



The voluntary tree planting campaign has been carried out for 14 consecutive years in the renovation area of Beipo, and a total of 162,150 people participated in the campaign.



New Appearance of Beipo

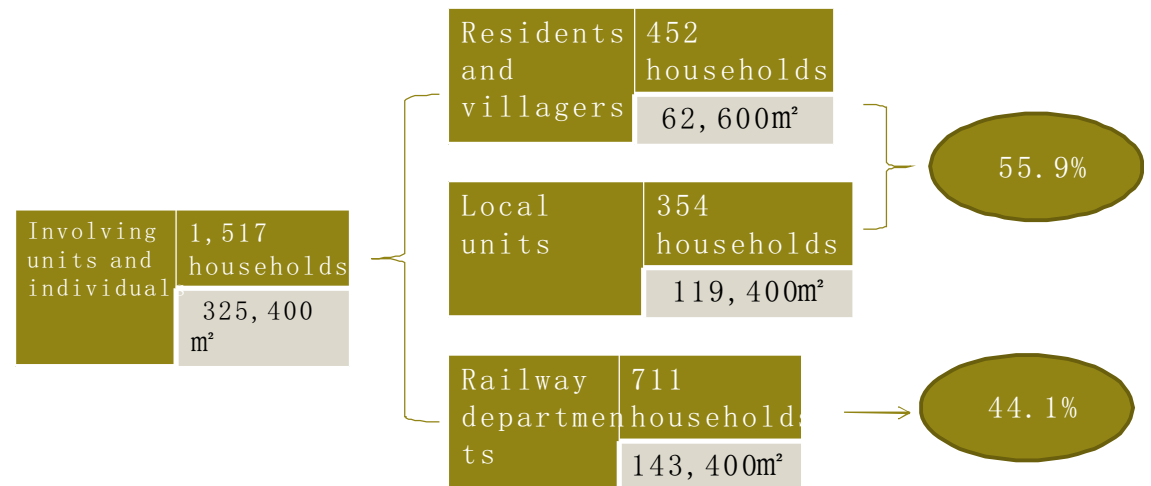


In the greening and renovation of the area, 10 parks and 1.9 million square meters of green space have been built.

Relocation along the Railways

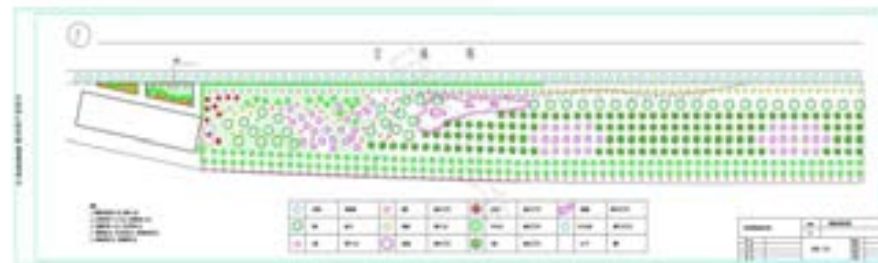


Schematic Diagram of Demolition and Relocation Project along Railway in urban area



In the early stage of industrialization from 1950s to 1970s, shanty areas were dotted along the railway lines in the city. A total of 325,400 square meters of shanties and dilapidated houses along the railway lines were dismantled and 1,517 households were relocated from 2005 to 2010.

Relocation along the Railways in process



After the Relocation along the Railways

After the relocation along the railways, 16 street parks and public gardens have been built along the original sites, forming a 31-kilometer green corridor in the urban area.



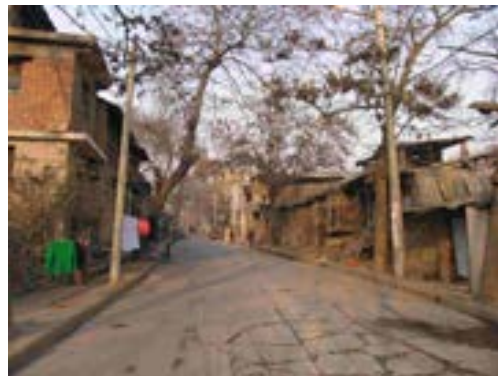
Renovation of Shanty Areas

Distribution of Shanty Area Renovation Projects in Baoji



From 1980s to 1990s, in the process of fast urbanization, many migrant-workers moved into Baoji from countryside and stayed in shabby shelters lacking basic infrastructures. In the past decade, 25 shanty areas was renovated with 51,008 households of 143,326 people moved into affordable housing from the shanty areas.

Original Appearance of Shanty Areas



Shanty Areas under Renovation

The green and low-carbon concept has been practiced in the renovation process. The technologies and measures applied included thermal insulation walls and roofs, energy-saving windows and doors, centralized heating, solar-powered public lighting etc.



Shanty Areas after Renovation



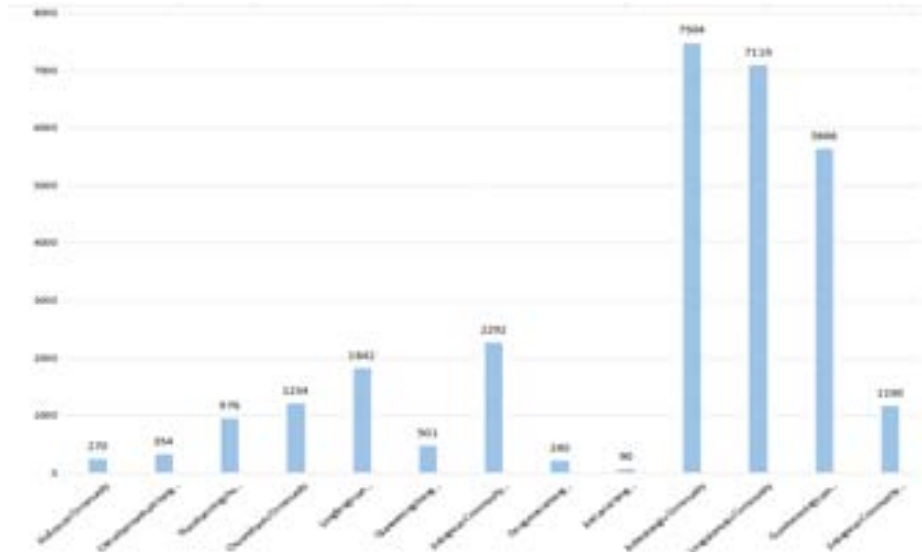
Development of Public Rental Housing

Distribution of Public Rental Housing Projects in Baoji



In the 21st century, the number of migrant-workers in the city has greatly increased. The low-income groups and new citizens have strong demands for the improvement of their living condition. With the multi-party participations, 29, 300 sets of public rental apartment were built in 13 residential estates achieving the goal of all residents have access to adequate housing.

Public Rental Housing under Construction



Distribution of Shanty Area Renovation Projects in Baoji

Project	Address	Longitude	Latitude	Year	Sets of Apartment
Xinheyuan Community	No. 8, Xinyuan Road, Jintai District	107.52168	34.30973	2008	1200
Chunshidun Community	No. 15, Chunshidian Road, Weibin District	107.11436	34.34644	2008	1234
Longfengyuan Community	No. 13 Haimin Street, Jintai District	107.26768	34.38745	2009	1842
Qianweizhuangcheng Community	Fengjiacui, Chongqing District	107.6495	34.2999	2009	501
Jielingwan Community phase I	No. 1, Jielingwan Road, Jintai District	107.10065	34.39580	2011	2292
Dongguocunshang Community	No. 10, Yanda Street, Jintai District	107.15073	34.37413	2011	240
Jietiancunshang Community	No. 30, Daoping Road, Jintai District	107.161999	34.410653	2011	90
Jiehuoshang Community	No. 800, Jiefangdong Road, Jintai District	107.13708	34.41377	2011	7504
Longshangcun Community	No. 80, Xibao Road, Weibin District	107.1644	34.34938	2011	7119
Guoshanhuangyuan Community	No. 1, Shoufan Road, Chongqing District	107.38018	34.34448	2011	5666
Nanhuashang Community	Sichuan Shantou Road	107.11894	34.347142	2012	1040
Chunshandunshang Community	Northeast side of Daoji Daily	107.16342	34.378414	2012	1104
Jielingwan Community phase II	No. 18, Jielingwan Road, Jintai District	107.10063	34.40911	2013	1190



After the Completion of Public Rental Housing



Low-Carbon Development Collaboration and Participation



The green and low-carbon concept is widely accepted in the affordable housing projects, such as waste sorting, centralized delivery, resource recycling, etc. The commuters mainly take public transportation or ride bicycles.

Low-Carbon Development Collaboration and Participation



Residents have equal access to the public facilities, including community services, medical and health care, primary and secondary schools, kindergartens, supermarkets, leisure plazas, cinemas, swimming pools, recreational rooms, day-care centers for the elderly, after-school classrooms, elderly universities, courier drop-off points, public bicycle stalls, barrier-free ramps and public memorial rooms etc.



Low-Carbon Development Collaboration and Participation

Community assistance and participation make the affordable housing attractive home for residents. 56 volunteer teams for mutual assistance, including charity fundraising, elderly and children care, employment skills trainings, cultural and sports activities organization, have been very active among residents.



Low-Carbon Development Collaboration and Participation

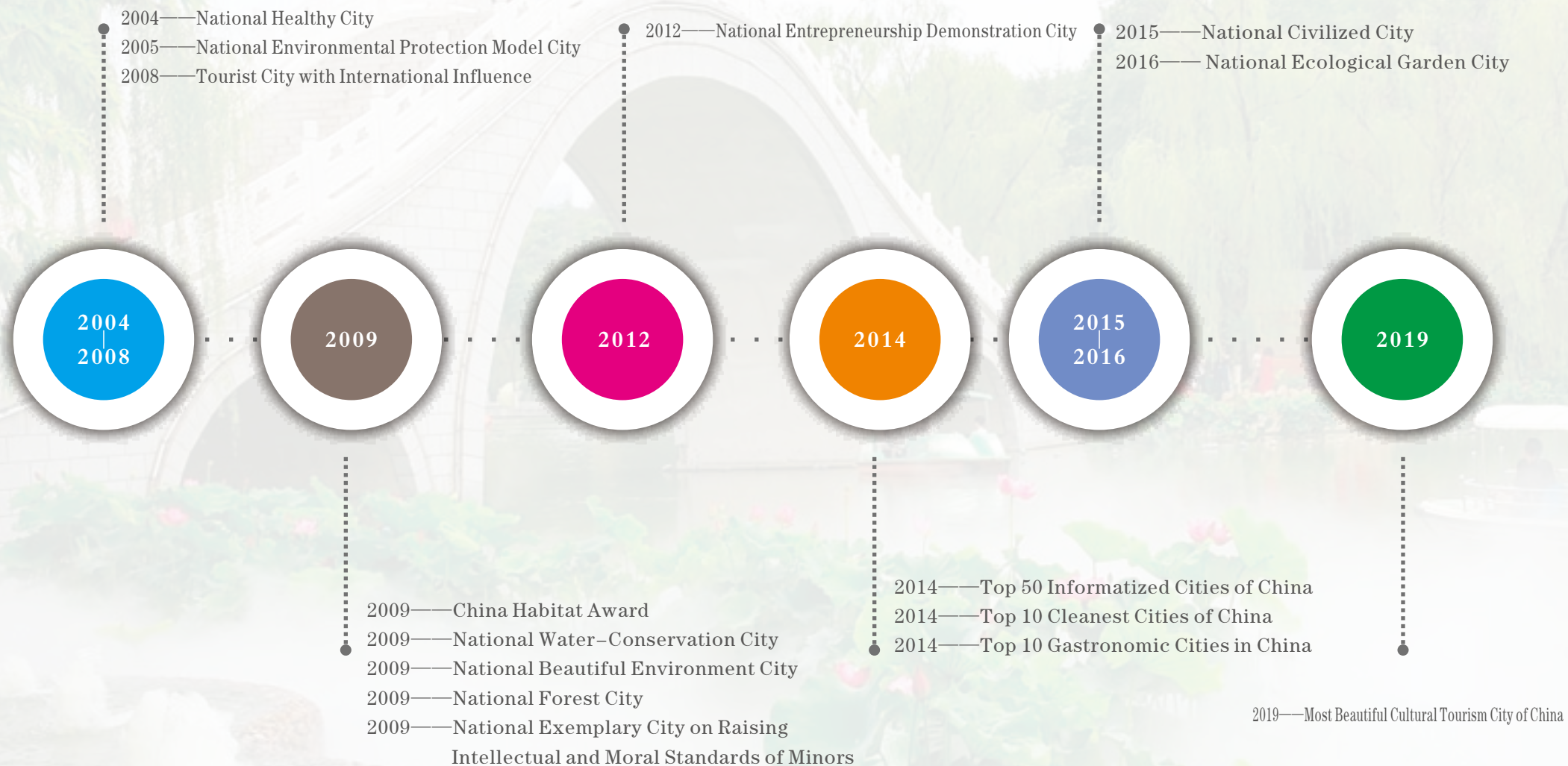


Defense Against Covid-19

Since the outbreak of the pandemic, the Chinese neighborhood watch tradition and community health assistance had made a solid line of defense against the Covid-19 with no one among the residents infected.



City Honors



City Honors



In July 2017, Premier Li Keqiang inspected the renovation of shanty areas in Baoji

City Honors

CHINA CONSTRUCTION NEWS has a special report on Baoji's experience in renovation of shanty areas.

2 2017年11月30日 星期四 综合新闻 中国建设报 本报编辑 郭航美

11.1615 万套棚改房 让民生与发展“双丰收”

“棚改，把老百姓从棚户区解放出来了，把让一帮人住的破房子变成了400多平方米的楼房了。”近日，在陕西渭南华阴市一个安置房小区内，新居民们正忙着收拾新家。在这里，他们告别了与几代人同住的老房子，住进了宽敞明亮的楼房。

渭南，今年下半年，启动实施了棚改安置房建设，目前已交付使用安置房1.1615万套。通过实施棚改，不仅改善了棚户区居民的生活条件，也带动了当地经济的发展。据渭南市政府相关负责人介绍，今年全市共启动棚改安置房项目100多个，涉及安置群众10万户，建筑面积1.1615亿平方米。通过实施棚改，不仅改善了棚户区居民的生活条件，也带动了当地经济的发展。

“双收”——群众的家更宜居上

近年来，渭南市政府“让老百姓住得好”的大政方针深入人心，棚户区改造成为民生工程的重中之重。通过实施棚改，不仅改善了棚户区居民的生活条件，也带动了当地经济的发展。据渭南市政府相关负责人介绍，今年全市共启动棚改安置房项目100多个，涉及安置群众10万户，建筑面积1.1615亿平方米。通过实施棚改，不仅改善了棚户区居民的生活条件，也带动了当地经济的发展。

民生——农村民房建设生活

在农村，如何让老百姓住得好，一直是政府关注的问题。通过实施农村民房建设，不仅改善了农村居民的居住条件，也带动了农村经济的发展。据渭南市政府相关负责人介绍，今年全市共启动农村民房建设项目100多个，涉及建设群众10万户，建筑面积1.1615亿平方米。通过实施农村民房建设，不仅改善了农村居民的居住条件，也带动了农村经济的发展。

质量——改善棚改安置房质量

2016年，渭南市政府启动了棚改安置房质量提升行动，全面提升棚改安置房的质量。通过实施质量提升行动，不仅改善了棚改安置房的质量，也带动了当地经济的发展。据渭南市政府相关负责人介绍，今年全市共启动棚改安置房质量提升项目100多个，涉及建设群众10万户，建筑面积1.1615亿平方米。通过实施质量提升行动，不仅改善了棚改安置房的质量，也带动了当地经济的发展。

