

# New Era of High-quality Urbanization

## Policy Express

By LIN Yuchen

A new policy that outlines the vision for China's urbanization, shifting the focus from rapid expansion to stable and efficient growth, with an emphasis on improving existing urban structures and enhancing the quality of life, was issued recently by the Central Committee of the Communist Party of China and the State Council.

The policy aims to transform cities into engines of modernization and key spaces for people's well-being. By 2030, China intends to make substantial progress in building "modernized people's cities," focusing on improving living conditions, sustainable growth, and governance. By 2035, these cities should be largely completed, with advanced urban systems and social services.

A central theme of the policy is transitioning urban development from a phase of rapid expansion to one of making better use of existing urban structures. This includes urban renewal, energy transformation, and focusing on people-centered policies. The plan calls for a tailored approach based on local conditions, emphasizing inclusivity and



An aerial view of the central business area of Zhengzhou city, Henan province. (PHOTO: XINHUA)

livability in urban planning.

Also emphasized is the integration of urban agglomerations and metropolitan areas, aiming to create well-connected, efficient urban networks. Areas such as Beijing-Tianjin-Hebei, the Yangtze River Delta, and the Guangdong-Hong Kong-Macao Greater Bay Area are prioritized to become world-class urban clusters.

The policy focuses on the simulta-

neous development of second-tier and smaller cities, improving their infrastructure, public services, and economic functions.

Additionally, the policy calls for the enhancement of megacities' competitiveness by refining their functions and supporting technological innovation, particularly in high-tech industries. These cities will be encouraged to improve their allocation of global

resources, develop cutting-edge technology platforms, and drive industrial transformation.

To encourage new growth drivers, a push for innovation in manufacturing, services, and green industries has been stressed, along with highlighting revitalization of underutilized urban assets, such as old buildings and inefficient land, to maximize space efficiency and stimulate local economies.

A key aspect of the policy is promoting sustainable urban development. In this regard, cities will focus on increasing energy efficiency, adopting green building practices, and reducing environmental pollution. Additionally, sustainable living practices, including water conservation, waste reduction, and low-carbon transportation systems form part of the plan.

Urban planning is a strategic framework for reshaping China's urban landscape. By prioritizing innovation, sustainability, and efficient resource use, the framework aims to improve people's quality of life and enhance the global competitiveness of China's cities. Through urban renewal and sustainability efforts, China is poised for a new era of high-quality, people-centered urbanization.



# Push for Unified Carbon Market by 2030

By LIN Yuchen

China recently released a policy aimed at accelerating the green, low-carbon transformation of its economy, emphasizing the importance of building a unified and highly efficient national carbon market.

The policy stresses China's commitment to confronting climate change head on, while driving sustainable economic development with a focus on upgrading the role of carbon markets to

control greenhouse gas emissions.

The policy's core objective is to establish a comprehensive carbon market that integrates mandatory carbon emissions trading and voluntary greenhouse gas reduction trading. By 2027, the mandatory carbon emissions market is expected to expand to include key industrial sectors, while the voluntary market should cover all critical areas.

By 2030, China aims to build a robust, transparent, and internationally aligned carbon trading system, setting

up a pricing mechanism that is genuinely reflective of environmental costs.

The policy sets out clear priorities to accelerate the carbon market's development. The national carbon emissions trading market is to be expanded gradually across all industries, with a focus on sectors that offer substantial emissions reduction potential.

The government initially plans to implement a quota system for carbon emissions, combining both free and paid allocation methods, and progressively shift towards a total cap on emissions. A market adjustment mechanism will also be created to ensure stability, enhance liquidity, and balance supply and demand.

The development of the voluntary carbon market is another key initiative. The government plans to establish a comprehensive strategy for voluntary emissions reduction projects, focusing on sectors with significant ecological and social benefits. The use of certified voluntary reductions in carbon trading will be encouraged, with government and state-owned enterprises leading by example in integrating these reductions

into their operations.

In addition, the policy focuses on improving the market's competitiveness by diversifying trading products, promoting green financial instruments, and expanding the range of market participants, including financial institutions and individual traders. Regulatory measures will be strengthened to ensure market transparency and prevent any form of manipulation.

To ensure the carbon market's success, China will also improve its management systems, including implementation of a nationwide digital platform for trading and emissions reporting. High-quality carbon data and rigorous oversight to maintain the integrity of the market is another area of importance.

In the international arena, China aims to contribute to global efforts to combat climate change by aligning its carbon market practices with international standards, and engaging in collaborative efforts to develop a fair and equitable global low-carbon transition.



An UAV equipped with lithium battery is tested. (PHOTO: XINHUA)

# A Course for Modern, People-centered Urban Development

From page 1

The strategy is paying off: 19 urban agglomerations now house 75 percent of China's population and account for approximately 85 percent of its GDP. As emphasized in the new policy, the goal is to build networked, cluster-based urban systems.

"A city cluster isn't just a group of cities," said Wu Zhixiang, a member of the Chinese Academy of Engineering from Tongji University. "It's an organic whole, linked by transportation, information, innovation and industrial networks."

*Where ideas take flight*

In Anyang, Henan province in central China, a drone recently delivered a business license and company seal just 10 minutes after the request was filed, symbolizing the city's push into the low-altitude economy.

Backed by the Lantian Laboratory, Anyang's drone industry reached 1.65 billion yuan in output in 2024, a 30 percent year-on-year increase.

This is innovation in action, where science meets society. Across the country, cities are cultivating ecosystems for innovation, nurturing everything from startups to tech giants.

In Shenzhen, policymakers are rolling out new support for high-growth firms, aiming to create a landscape where "leading enterprises dominate the skyline, SMEs blanket the ground, and innovators open new frontiers."

"It's about creating the right soil for ideas to take root and scale," said Cao Zhongxiong, assistant director at the China (Shenzhen) Institute of Comprehensive Development.

*Preserving the past, embracing the future*

As cities modernize, there's a growing emphasis on preserving cultural identity. In Pingyao, Shanxi province in north China, a UNESCO World Heritage site with over 1,000 protected cultural relics, local officials are using AI and big data to map historical patterns and guide urban planning.

The city's "separate governance for old and new" model ensures that while modern infrastructure expands beyond the ancient walls, the historical core remains intact.

"Heritage must not be frozen in time," said Professor He Yun'ao of Nanjing University. "With digital tools, we can help ancient culture speak to modern audiences, bridging past and present."

*Cities that 'think' and adapt*

When Typhoon Wipha lashed Wuhan in July, the city did not suffer waterlogging. Thanks to its "sponge city" infrastructure and smart flood control systems, streets that once used to be flooded now drain efficiently.

"Resilience means being prepared and anticipating (disasters)," said Peng Chong, deputy dean of the School of Architecture and Urban Planning, Huazhong University of Science and Technology.

Leveraging the Internet of Things and big data, cities like Wuhan are

building all-encompassing monitoring systems that track risks from the sky to the soil.

Chongqing — a mountainous megacity — is using AI to manage urban operations at scale. Its "City Brain" connects with 41 districts and over 1,000 township centers, monitoring everything from traffic to public safety in real time.

In Qingdao, Shandong province in the east, a smart community app brings services at residents' fingertips — whether it's booking a doctor, ordering groceries, or repairing appliances. "Smart cities are not showing flashy tech," said a local official. "They're about making life easier, one click at a time."

At its core, China's urban transformation is about people. These initiatives converge on a single goal: improving quality of life. With science and technology as the foundation, and human well-being as the compass, China's cities are growing and evolving.

## Vibrant China

# Sichuan's Unique Heritage-Consumption Synergy

By LIN Yuchen, LIU Xia, WANG Shanshan, DAI Xiaopei & FANG Linlin

Sichuan, a province renowned for its cultural heritage and diverse landscapes, is embracing a new era of growth by integrating its cultural and tourism resources with a broader range of industries. This integration aims to boost both the local economy and people's quality of life, creating a unique synergy between heritage and modern consumption.

Since January, Sichuan's tourism sector has seen remarkable growth. For example, the night cruise on the Jinjiang river project generated around 24.88 million RMB, while the scenic Emei Mountain welcomed over 4.65 million visitors.

The service sector in Leshan city in the south surpassed 100 billion RMB in added value during the 14th Five-Year Plan period (2021-25). These figures reflect the success of a broader strategy to combine traditional culture with modern tourism, forging a dynamic model for development.

One key aspect of this transformation is the adaptation of historical sites into vibrant tourism hubs. In the ancient town of Suji in Leshan, for instance, more than 400 million RMB has been invested in the renovation of the town's heritage sites and the development of new cultural tourism products. As a result, Suji saw 4.65 million visitors and generated 502 million RMB in tourism revenue from January to May.

Other initiatives, such as the Shibaihe Tourism Area in Weiyuan county, have also pioneered new tourism experiences, including educational

tourism courses and large-scale live performances that highlight the region's unique cultural heritage.

Sichuan's modern urban developments are equally vibrant, with new retail and entertainment spaces springing up across cities. For example, the "Naxi Silk Factory — Micro Buzz Energy Station" in Luzhou combines a variety of business models, including local food, entertainment, and social spaces, to create a dynamic new consumption environment.

Similarly, the Luhui CPI Commercial Park in Chengdu is leveraging its natural surroundings to create a relaxed and stylish shopping experience, attracting a unique crowd and achieving significant foot traffic.

At the same time, cutting-edge technologies are being introduced to enhance tourism experiences. In Chengdu, the Jinjiang night cruise offers an immersive experience using Mixed Reality technology, so that visitors experience ancient Sichuan as if they were stepping into a historical scene.

In Emei Mountain, an "exoskeleton hiking assistant robot" was introduced to help tourists conserve energy during hikes, further blending technology with cultural exploration.

Through a combination of policies, activities, and diverse tourism products, Sichuan is redefining its identity as the place where life is easy. By merging culture, tourism, and industry, the province is not only creating new economic growth but also offering a model for sustainable, high-quality development that benefits both locals and visitors alike.



A child has fun in Chengdu, Sichuan province. (PHOTO: XINHUA)

# JUNO to Reveal Nature of Matter and Universe

From page 1

Li Xiaonan, director of JUNO at the Institute of High Energy Physics (IHEP), Chinese Academy of Sciences (CAS), has been living in Kaiping since 2013 and is in charge of infrastructure. Although Li majored in particle physics, during the seven years of construction, he also studied multiple fields such as geology, hydrology, measurement and control, and fire protection, to communicate smoothly with the contractors and overcome ensuing difficulties.

JUNO is the most challenging project I have ever conducted, Wang Yifang, a renowned high-energy physicist and an academician of the CAS, frankly stated. The challenges were not only in engineering, but also in the development of the detector's key core component.

The acrylic spheres used in JUNO were 20 times larger than the largest SNO experimental acrylic sphere in the world when the project was proposed.

The Donchamp company set up a dedicated production line and worked closely with the IHEP, breaking through multiple technical barriers to develop acrylic spheres qualified for JUNO.

*Independent and collaborative innovation*

The photomultiplier tube (PMT) is the most crucial component of the detector. A total of 20,000 PMTs operate simultaneously to capture scintillation light from neutrino interactions and convert it to electrical signals.

However, the technology was monopolized by Japan and acquiring it was very costly. Therefore, independent R&D of PMT was put on the agenda and in 2009, Wang and his team proposed a novel PMT solution.

After 11 years of verification, they successfully developed a PMT with independent intellectual property rights and the highest photon detection efficiency in the world. They also obtained patent license from the European Union, the United States, Japan and other countries.

In 2020, 15,000 20-inch domestically produced PMTs were delivered. Compared with imported PMTs, this saved two-thirds of the cost and rescued the domestic PMT industry, which was on the verge of bankruptcy.

While hosted by the IHEP, JUNO is a collaborative innovation of over 700 scientists from 74 research institutions in 17 countries and regions, along with thousands from the industrial sector.

The landmark achievement is the result of the international cooperation among many research groups outside China, who have brought to JUNO their expertise from previous liquid scintillator set-ups.

Marco Beretta, an Italian expert, arrived at the experimental site in July 2023 and became one of the heads of liquid scintillation. When Beretta saw the light inside the detector for the first time, his excitement knew no bound. "The birth of such a huge detector is like a paean, so wonderful," he said in eulogy.