

# Invigorating China Through Sci-tech, Education and Talent

## Policy

By ZHONG Jianli

Education, science and technology, and human resources are the foundational and strategic pillars for building a modern socialist country in all respects. That's according to the report presented to the 20th National Congress of the Communist Party of China (CPC), mark-

ing the first time the three pillars are written into one report chapter.

Science and technology should be regarded as the primary productive force, talent as the primary resource, and innovation as the primary driver of growth, says the report.

"For the first time, the strategy for invigorating China through science and education, the workforce development strategy, and the innovation-driven development strategy are systematically explained in one chapter in the report,

which shows the importance of the three strategies in helping the country realize its high-quality development and modernization drive," said Mu Hong, vice chairman of the National Development and Reform Commission, at a press conference on October 24.

Mu pointed out that these three strategies jointly serve the building of an innovative country. He further interpreted it in three aspects:

First, priority should be given to education. It is necessary to fully implement the CPC's educational policy, carry out the basic task of fostering virtue through education, continue to follow a people-centered approach to developing education, and move faster toward building a high-quality educational system.

Second, innovation will remain at the heart of China's modernization drive. The country will improve the new system for mobilizing resources nationwide to make key technological breakthroughs, and enhance basic scientific and technological capacity, so as to boost the overall performance of China's innovation system.

Third, the country will adopt more proactive, open, and effective policies on talent, and make concerted efforts to cultivate talented people in all fields, so as to create a large, well-structured, and high-quality workforce. It will also increase international personnel exchanges and make the best use of talent of all types to fully harness their potential.

China will move faster to build world hubs for talent and innovation, promote better distribution and balanced development of talent across regions, and strive to build up its comparative strengths in global competition for talent, according to the report.

To develop a strong workforce for the modernization drive, it is of vital importance to follow the principles of the CPC managing talent, and deepen the institutional reform for personnel development, said Zhang Mingxi, researcher at the Chinese Academy of Science and Technology for Development (CASTED).

Zhang noted that it is essential to give full play to the decisive role of the market in allocating human resources, along with the government playing a due role. The mechanisms of training, using, evaluating, supporting and encouraging creativity of talent should be improved, and professionals should be free from unnecessary institutional constraints.

To enhance the international competitiveness of Chinese professionals, the country should build a network of exchanges and cooperation in science, technology and education with other countries. High-level experts from all over the world and outstanding young talent are welcomed to study and work in China, said Shi Changhui, also a researcher at CASTED.

*This article is written in cooperation with the Chinese Academy of Science and Technology for Development.*



Huangbi'ao village, Xiangshan county, Zhejiang province. (PHOTO: VCG)

## First Batch of National Demonstration Counties for Rural Revitalization Released

By LI Linxu

In its latest push for the modernization of the agricultural sectors and rural areas, the National Rural Revitalization Administration (NRRRA) has released a list of the first batch of 100 national demonstration counties for rural revitalization.

These counties are from 22 provinces, five autonomous regions, four municipalities, and Xinjiang Production and Construction Corps.

Shandong province, Heilongjiang province and Sichuan province secured the most counties with six each.

The construction of national demonstration counties for rural revitalization is a follow-up measure to implement the No. 1 Central Document of 2022 jointly released by the CPC Central Committee and the State Council.

The document has laid out key tasks to comprehensively push forward rural revitalization this year, among which the construction of national demonstration counties is high on the agenda.

Of particular note is that advancing rural revitalization across the board has been written into the 20th CPC National Congress report.

The most challenging and arduous tasks for China in building a modern socialist country in all respects remain in the rural areas, said the report, pledging that agricultural and rural development will always be a priority.

To build 100 demonstration counties, 1,000 demonstration towns and 10,000 demonstration villages are one of important measures to advance rural revitalization, said NRRRA.

NRRRA hopes that these counties will focus on making breakthroughs in key areas such as rural development, rural construction and rural governance, so as to explore rural revitalization models and paths in different regions.

Focusing on such areas, Xiangshan county in Zhejiang province, one of 100 entrants on the list, has rolled out a series of policies and measures.

Last year, Xiangshan county's total output value of agriculture, forestry, animal husbandry and fishery reached 15 billion RMB. Meanwhile, the county is also making advancements in environmental protection and cultural-ethical enrichment, winning an array of honors and prizes.

Mechanisms will be set up to encourage more capital, talent, technology and information flowing into these counties, said NRRRA, adding that enterprises, research institutes and organizations are encouraged to deepen ties with such counties in project and technological cooperation.

Joint efforts across society are needed to advance the construction of demonstration counties for rural revitalization, said NRRRA, emphasizing that farmers should play a key role in the process.



Zhang Liangang (third from the right), a delegate to the 20th CPC National Congress, is a senior expert of Shandong Port Group. He leads his team to independently develop a new intelligent control system for Qingdao port, one of the most automated ports in the world. (PHOTO: XINHUA)

## First Regulation for Optical Astronomical Observation Issued

By CHEN Chunyou & ZHANG Yun

In order to protect optical observation environment at night at the Mount Saishiteng astronomical observation base and its surrounding areas, an environmental protection regulation was released in Haixi Mongolian and Tibetan Autonomous Prefecture this October, and will take effect from January 1, 2023.

This is China's first environmental protection regulation for optical astronomical observation.

High-quality optical astronomical observatories are scarce and precious

national strategic resources, and should be as well cared for as protecting mountains, rivers and forests, said Cai Rangtai, party secretary and director of the Standing Committee of the Haixi People's Congress in Qinghai province.

In terms of ecological environment, dark night is a part of the natural environment. Its existence is a part of natural phenomena and laws. For billions of years, life on the Earth lives in changing seasons brought about by the planet's rotation and revolution, and the alternation of day and night.

Due to the development of human

society, light pollution is increasingly serious. People in most cities across the world cannot see the galaxy with their naked eyes at night. Light pollution creates man-made daylight at night, which has affected the normal life circle, and become a destroyer of ecology and environment.

The regulation divides Haixi's Lenghu astronomical observation environment area into dark night protection core area and dark night protection buffer area.

In the core area, it is prohibited to construct projects and carry out activities that can affect the astronomical ob-

servation environment. In the buffer area, the direction of all outdoor fixed night lighting facilities should be below the horizontal line, according to the regulation.

China has five "dark night and starry sky protection places," including Ali and Naqu in Xizang, Yeludang in Jiangsu, Taihangonggu in Shanxi, and Geyuan in Jiangxi. Although Lenghu is not included in this list, its dark sky protection has never been neglected.

Currently, 27 optical telescopes are under construction in Lenghu. It is expected to become the largest astronomical observation base in Asia.

## Influential Int'l Quantum Center Being Established in Hefei

### Hi-tech Zones

By CHEN Chunyou

Hefei High-tech Zone (HHZ), located in east China's Anhui province, has been ranked among the top ten national high-tech zones for eight consecutive years.

In the past decade, HHZ's regional GDP had increased from 33.7 billion RMB in 2012 to 125.27 billion RMB in 2021, with an average annual growth of 15.7 percent, and the number of national high-tech enterprises had increased from 302 to 2,000.

One of the typical industries in HHZ is the quantum industry, which has made significant progress in leading the country's quantum information development.

According to the action plan for building a world-leading science and technology park in HHZ, released this September, the output value of quantum information industry is expected to exceed 20 billion RMB, and the number of enterprises in this field is planned to exceed 100 by 2025.

HHZ is the core area of Hefei Com-

prehensive National Science Center, and is home to world-class universities, such as University of Science and Technology of China (USTC).

In recent years, professors and students from USTC come to HHZ and advance the industrialization of their research achievements in the quantum field, and set up leading enterprises, represented by Origin Quantum, QuantumCtek, and CIQTEK, which have become the strength for HHZ in developing quantum at home and abroad.

Origin Quantum, founded in September 2017, is the first enterprise in China to officially put quantum computing into commercial use. Over the past five years, it has applied for more than 500 patents, ranking first in China, and filling many gaps in the chain of quantum computer applications.

Its inventions, all of which are pioneered in China, include a superconducting quantum computer called Wu Yuan, an all-in-one quantum computer measurement and control machine, a quan-

tum computing cloud platform with a superconductor quantum computer, and a quantum operating system.

In addition, with competitive talent resources, HHZ has continued to break through the bottleneck technologies and key technologies, and cultivated some future industries, such as quantum technology, artificial intelligence and future energy.

In April 2018, HHZ was included in the action plan for building "world-class high-tech parks" by the Ministry of Science and Technology, which indicates that HHZ has the potential for competing in the world.

To date, a total of 77 enterprises in HHZ have state-level R&D institutes, and the number is second only to Beijing's Zhongguancun, which is a leading science and technology park in China.

Since 2021, HHZ has been accelerating building China's first quantum computing industrial park, which is to accumulate upstream and downstream enterprises here to help form a complete industrial chain. It is expected that by 2035 HHZ will have grown to be an influential quantum center in the world.



A visitor looks at the quantum computer prototype "Juzhang" in Hefei. (PHOTO: XINHUA)

## Solid Growth in Q3



China's economy is on more solid ground in the third quarter of this year with major indicators showing positive signs of stabilization. The country's GDP grew 3.9 percent year on year to 30.76 trillion RMB in the third quarter, 3.5 percentage points higher than that in the second quarter, according to the data from the National Bureau of Statistics.

Photo shows trucks wait to load containers at a container terminal in Rizhao city, Shandong province. (PHOTO: XINHUA)

## International Experts Share Views on China's Progress

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Thanks to the technology, people living in the rural areas can have access to more resources like electricity, water, infrastructure, said Eduardo Alberto Verástegui, professor at University of International Business and Economics, who also recognized China's efforts in controlling the COVID-19 pandemic with technology.

Talking about the Belt and Road Ini-

tiative, China has provided extraordinary opportunity for other countries to benefit from its progress, said Mark Levine, professor at Minzu University of China.

"We have to rethink the way that we govern the world. China's vision at least gives us the potential to think about the world, as well to think about processes of how we decide our future, and then how we build it," said Walker.