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WEEKLY EDITION

## China Strives for High-quality, Inclusive Development

Edited by WANG Xiaoxia

The annual Central Economic Work Conference was held in Beijing from December 15 to 16, as Chinese leaders reviewed the country's economic work in 2022 and decided on priorities for the economic work in 2023.

To pursue steady progress while ensuring economic stability, a proactive fiscal policy and prudent monetary policy will continue to be implemented next year. It is noted that various policies will form synergy for high-quality development.

In the fields of science and technology, China will carry out an array of national major projects, giving full play to the role of government in leading the work on making breakthroughs in key and core technologies, and highlighting the principal role of enterprises in technological innovation, said the conference.

Industrial policies should facilitate the transformation and upgrading of traditional industries and promote the growth of strategic emerging industries.

Meanwhile, China will accelerate the building of a modern industrial system, and pull resources to tackle the problems in key and core technologies.

Efforts will also be made to speed up the construction of a new energy system, enhance the global competitiveness of traditional industries, accelerate the research and application of cutting-edge technologies such as new energy, AI, biological manufacturing, green and low-carbon industries, and quantum computing, and vigorously develop the digital economy.

In addition, China will continue its pursuit of high-level opening up. The country will make greater efforts to attract and utilize foreign capital, widen market access, promote the opening-up of modern service industries, and grant foreign-funded enterprises national treatment, according to conference.

Furthermore, China will actively seek to join the high-standard economic and trade agreements such as the *Comprehensive and Progressive Agreement for Trans-Pacific Partnership* and the *Digital Economy Partnership Agreement*.



Citizens shop for ornaments to celebrate the new year. (PHOTO: ZHOU Weihai/S&T DAILY)



China has mapped out its latest plan for rural development at a key conference, highlighting work to advance rural revitalization across the board and accelerate the construction of a strong agriculture sector. The picture shows farmers harvest rice in Linyi city, east China's Shandong province. (PHOTO: XINHUA)

## Editor's Pick

### China's Trend Setting Port Automation

By LIN Yuchen

China's progress in port digitalization is leading global smart port construction through greater automation. Many examples of this trend include the world's first smart zero-carbon terminal in Tianjin, which, after going into operation, increased the single bridge working efficiency by 40 percent, while allocating 60 percent fewer personnel on-site than previously required.

In the port of Xiamen, some container terminals achieved full automation or applied 5G in all operations in 2020, according to the China Water Transport.

Consequently, China currently leads the world in terms of both the existing quantities of automated ports and ongoing automated port projects, according to the Ministry of Transport.

#### Port digitalization

Through cooperating with technology suppliers, Tianjin's terminal intro-

duced an intelligent horizontal transport system capable of level-4 automated driving in its operation areas. The system is compatible with driverless products from different suppliers.

The biggest challenge of realizing a zero-carbon port comes from traffic congestion in the transport process, said Yang Rong, general manager of Tianjin Port No.2 Container Terminal Corporation, adding that now the intelligent system solves this problem effectively and has operated safely for more than a year.

Likewise, the fourth phase of the Shanghai Yangshan Deep Water Port realized long-distance remote control through F5G, a technology that largely expands the reach of fibre. Staff can now control the on-site equipment from 100 kms away.

"Remote control systems have become an important part of port transformation, and the emergence of F5G technology comes at the right time to realize remote control," said Huang Heng, a spokesperson of Shanghai International

Port Group, adding that by applying F5G, "We have built an all-optical network highway for the entire port, which, in the future, will open the door for larger-scale computing and application of new technologies."

Other success stories refer to the Rizhao Port in east China's coastal province Shandong. There, technology companies have helped build the world's first open-sea automated parallel wharf, reducing its initial construction costs by 70 percent compared to traditional ways, according to Wang Yusheng, deputy manager at Shandong Technology Port Group.

Ambassadors of several countries including Thailand, Argentina, and South Africa have visited China's smart ports, and owners of terminals such as the Laem Chabang Port in Thailand and Chancay Port in Peru have used Chinese small port solutions to challenges, according to Qiu Shikui, staff at Huawei Technologies Corporation. *See page 3*

## Managing COVID-19 with Measures Against Class B Infectious Diseases

China will manage COVID-19 with measures against Class B infectious diseases, instead of Class A infectious diseases, in a major shift of its epidemic response policies.

China has renamed the Chinese term for COVID-19 from "novel coronavirus pneumonia" to "novel coronavirus infection," said a statement released by the National Health Commission on December 26.

Starting from January 8, 2023, China will downgrade management of the disease from Class A to Class B in accordance with the country's law on prevention and treatment of infectious disease, and remove it from quarantinable infectious disease management carried out in accordance with the Frontier Health and Quarantine Law of the People's Republic of China, added the statement.

Currently, COVID-19 is classified as a Class B infectious disease but subject to the preventive and control measures for a Class A infectious disease in China.

Basic conditions have been in place to support such an adjustment, said a document released by the State Council joint prevention and control mechanism against COVID-19 on the same day, citing the latest virus mutation, the development of the epidemic and the country's epidemic response basis.

Authorities will drop quarantine measures against people infected with novel coronavirus and stop identifying close contacts or designating high-risk and low-risk areas, said the document.

COVID-19 cases will receive classified treatment and a timely adjustment will be made to medical care policies. The country will also adjust its testing policies as well as the frequency and content of epidemic information release.

In addition, disease control measures targeting inbound travelers and imported cargo will be lifted, said the document.

Following the adjustment, China's COVID-19 prevention and control efforts will focus on protecting health and preventing severe cases. Measures will be rolled out to protect people's lives and health to the utmost and minimize the impact of the epidemic on economic and social development.

Source: XINHUA

## WEEKLY REVIEW

### Carbon Policy Tool Gains Momentum

As of December 22, the cumulative turnover of China's carbon emission trading market exceeded 10 billion RMB. Having run for 350 trading days, the market witnessed cumulative trading volumes of 223 million tons.

### C919 Verification Test Flights Begun

The COMA C919 large passenger aircraft began 100 hours of empty aircraft verification test flights in December 26. It is expected to meet the regulatory requirements of the Civil Aviation Administration of China to commence commercial passenger operations by spring 2023 at the earliest.

### Crop Yields Remains Strong

The total crop yields of China exceeds 650 trillion kilograms in 2022, up 0.5 percent compared to last year, according to data released recently by the National Bureau of Statistics. This is the 8th consecutive year the country produces annually over 650 trillion of crops.

### New Method Developed to Preserve Female Fertility

Chinese scientists have developed a new method to preserve mouse follicles at a very low temperature, increasing their viability by more than 30 percent after recovering, compared with traditional methods, according to the research published in *Nature Communications*.

Despite the continuous COVID-19 pandemic, the scientists and researchers have made so many achievements in 2022 that promoted global development. The editors at S&T Daily managed to reach consensus on the following accomplishments (in chronological order) as their pick of this year.

## Top 10 Sci-tech Achievements in China in 2022

1. Transistor with Sub-1-nm Gate Length Made with Graphene
2. Carbon Dioxide Compounded to Glucose and Fatty Acids
3. FAST Discovers First Persistently Active Repeating Fast Radio Burst
4. China's Third Aircraft Carrier the Fujian Launched
5. New World Record Created in Steady High Magnetic Field
6. New Lunar Mineral Changesite-(Y) Discovered
7. Comprehensive Solar Probe Kuafu-1, Advanced Space-based Solar Observatory, Enters Orbit
8. Education, Sci-tech and Talent Emphasized in the Report to 20th CPC National Congress
9. Mengtian Lab Module, Last Part of China Space Station, Successfully Launched
10. Perennial Rice Successfully Bred in Yunnan

## Top 10 Sci-tech Achievements in the World in 2022

1. First Pig-to-human Heart Transplant Achieved
2. James Webb Space Telescope Images Reveal Early Universe
3. Amino Acids Identified for the First Time on an Asteroid/Outside the Earth
4. Clearest Evidence for the Existence of Tetraneutron, the four-neutron state, Obtained
5. Artificial Intelligence Developed to Design Protein Structures, Paint and Chat
6. World's First Synthetic Embryo Cultured Through Only Stem Cells
7. Asteroid Dimorphos' Orbit Successfully Changed after Being Hit by NASA Spacecraft
8. Mengtian Lab Module, Last Part of China Space Station, Successfully Launched
9. Quantum Computing Research Further Advanced with Achievements from Wormhole Simulation to Teleportation
10. First Scientific Energy Breakeven Realized via Fusion Ignition

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